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PART FIRST.

ORIGINAL COMMUNICATIONS.

The substance of some Remarks made before the Columbus Scientific Association, on Ethnology. By J. DAWSON, M.D., one of the Editors.

Mr. President:—I was appointed at the February meeting of this Association, to read a paper on the subject of Ethnology.

The term literally signifies a discourse on "*nations*," from "*ethnos*" and "*logos*." It is used, however, to embrace every thing pertaining to the Natural History of Man—Man as an intellectual and moral being, and Man as an animal—his relations organically to others of his race, to inferior animals, and to the atmospheric and terraqueous influences with which he is surrounded.

An investigation of this character, it is easily seen, necessarily involves a great length of time, careful observation of nations—how they have been affected by surrounding circumstances, and what appears to be the status, moral and intellectual, of each one, in its primitive normal state.

It is certainly a difficult task for an individual, however gifted, to stand among the members of his own race, and carefully survey and weigh the race peculiarities that surround him, and from which he himself is not exempt. How much more difficult then, the task, by all the means within our reach, of estimating the characters—moral, physical and intellectual—of all the races or nations of the earth. This is often undertaken, and although the results are occa-

sionally much alloyed with error, yet many of our most practical and comprehensive views are thus obtained.

Mankind may be investigated either by their *structure* or their *actions*—their national anatomy or their national physiology. The former is our method of investigating the nature of inferior animals, the vegetable kingdom, etc. So valuable, indeed, has it been to natural history that zoölogists have had no hesitancy in pronouncing by it upon, not only the habits of the living animals, but even upon those found in the fossilized state, and now extinct. Structure is really inseparably connected with function, and is the key to it. A principle, therefore, universal in its application, is, that differences in structure give rise to difference in function. The slightest variation in an organ, an apparatus, or an organism, will be perceivable in the movements of the animal—in its physiology.

To this principle, there seems to be great reason to believe that man is just as amenable as any other animal. Although all of the races seem to be constructed after the same general pattern, yet the most superficial observer recognizes individual differences—differences that separate them as widely from each other, as the more degraded of them are separated from the most anthropoid of inferior animals. The supposition has for some time been increasing in popularity, with those capable of correct thought, that it is to the diversity of physical organization, more than to any thing else, that should be attributed the differences which obtain among nations, in regard to science, political and religious institutions, art, etc. For example, some nations are progressive, appear all the time to be traveling upwards, are not satisfied without a high order of civilization, a monotheistic form of religion, and culture of the intellect to its utmost capacity. Others are non-progressive, do not wish to depart from primitive customs, are satisfied with the patriarchal form of government, adopt the polytheistic form of religion, make but very rude efforts in the way of the arts, and have but few wants that rise higher than the stomach. We repeat, it is a growing belief that such race peculiarities are the result of physical organization.

The inquiry before us is not entirely modern, and it may not be out of place just here to say something of its history. Ethnology was regarded as being worthy of attention by the earliest of the philosophers. We are told that Thucydides, the Grecian historian, treated of man in his moral and political aspects, and gave sketches of the manners and migrations of the early Greeks. Herodotus, in

recording the history of certain nations, gives also their physical appearances. Plato, Aristotle, and Hippocrates discuss the influence of climatic agents on man, and his relations to the inferior animals. Latham observes that the *Germania of Tacitus* is the nearest approach to proper Ethnology that antiquity has supplied. Linneas, Buffon, and Cuvier have scattered remarks on the physical characters, to a certain extent; but neither of them investigated the points, with any accuracy, that seem to indicate, with most certainty, physical diversity.

The circumstance that man stands at the head of the animal kingdom, mentally and morally, produced a conviction among zoölogists of early times that he was unique, and not properly within the scope of zoölogical inquiries. This feeling was in the mind of Aristotle, the founder of Natural History as a science. Barboncois, Ray, Pennant, Brissau followed the learned Stagirite in isolating man, and ignoring entirely his animality. It is true that Linneas, under the title of Anthropomorphia, has brought together the genera *Homo* and *Simia*, and that Cuvier, in his *Regne Animal,* has a recognition of the zoölogical relations of man; yet the investigation of him, his relations to natural laws, or, in other words, the science of man in general—*anthropology*—and the differentia of nations—*ethnology*—have had but a very imperfect consideration at the hands of any one, until about seventy years since—the time of Blumenbach.—J. Aitken Meigs, M.D.

Have all the Races originated from Adam and Eve?

The question of the unity of origin of the races, is one not easily settled in the present state of our knowledge. The affirmative is supported by those who take the Mosaic account of the creation, as being true in a literal sense, and also by several cosmographers of learning. The negative, viz: the races are of diverse origin, is, perhaps, the most generally believed, by those who have made the subject a matter of study. It should, however, be recollected that it is by no means susceptible of proof. The evidence bearing on it is, in all respects, imperfect. Profane history is silent on the subject; pretends to no knowledge in regard to it. No nation, indeed, has transmitted to us a single word as regards its origin—whether of the Adamic stock, or an autochthon of the country where it exists. Nor has any thing yet been discovered on monuments throwing any light on the subject. Champollion, Dr. Young, and Rosselini have successfully interpreted the writings on the monuments of the

most renowned nation of antiquity—the Egyptian—but from whence the Egyptians came, or the length of time, even, that they have been inhabitants of the country, are questions that we have no means of solving. The cronologers of that country tell us that the people had a government thirty-six thousand years ago, in the valley of the Nile—how much longer they pretend not to know—but it is not said whether the nation is indigenous or exotic. We are in the same darkness with reference to all the nations of the earth—the Chinese, the Hindoo—two nations remarkable for culture—the aboriginals of America, the ancient Britains, the Negroes of Africa—are all alike ignorant of their origin; do not know whether they were created on the soil they are occupying, or whether they are severally strangers in foreign lands. Those who write history for us, found these nations where they now are, not only without the ability to tell any thing about their origin, but without the ability—even the more intelligent of them—to communicate, in a reliable manner, any fact, phenomena or event that happened six hundred years before the birth of the Savior, or twenty-five hundred years ago. Humiliating, indeed, as it may seem, history beyond this period is worthless.

So inattentive, therefore, have been nations in regard to their origin, that, with the exception of one—the Jewish—we are without any data; and this one seems not to have been favored with a historian, or human archeologist, until some twenty-five hundred years after its reputed commencement.

History failing to throw any light on this subject, a solution has been attempted by other and very different methods. Those engaged in the study of natural history, have ascertained pretty positively, that animals of *different* species are not prolific beyond the first cross. A hybrid, it is said, is produced that is sterile—a well known example of which is in the *Mule*. It is believed that nature has established the sterility of hybrid animals by an organic impediment. Taking the sterility of the offspring of animals that are of different species, as a truth, it is contended that mankind are all of the *same* species, because all of the races can mix, and produce prolific offspring that is capable of becoming a separate race, with all the powers and forces of the primitive stocks—a race, in short, capable of perpetual reproduction. Observation has been directed, of late, to this subject, with some care. And although we are not prepared to state that any conclusions have yet been matured per-

fectly, a good amount of information has been collected. The instances of mixture of races, are numerous. We have only space to notice some of the more important. The *Mulattoes* came from the Whites and Negroes; the *Griquas* from the native Hottentots of South Africa and the Dutch colonists; the *Cafusos* from the Indians of Brazil and Negroes; the *Papuas* from the Malays of New Guinea and the Negro.

In each of these cases, the progeny resulting from the parent stocks is prolific to a certain extent, but not to the extent of maintaining a permanent existence; or, like the parent races, of being able to perpetually reproduce itself. The Mulattoes, the race with which we are best acquainted, run out at the third, or, at the farthest, the fourth generation. The progeny resulting from the Malay and African, or from any variety of the yellow race and African, seems to possess a greater degree of durability, but even here, it has not the stamina, as far as observation now extends, of either of the races giving rise to it, and sooner or later decays.

The facts therefore, as far as they go, instead of warranting the assumption that the races, on mixing, are all prolific—all capable of reproduction, in the true and full sense of that term—seem to indicate that those most widely separated, as the Negro and White, are only partially prolific. Their progeny is prolific, *inter se*, to the second and third generation, and after that, sterile. Though not hybrids on first cross, they become so. The argument, then, that the races are all of the same species because they, on mixing, are prolific, is defective, being only about half true. The hybridity test, therefore, amounts to but little, when carefully examined.

Prof. Agassiz has given some attention to this "unity of origin" question, and his views have been looked upon, by those acquainted with his capabilities for cognate inquiries, with great deference. He has been quoted as favoring both sides of the question. The *monogenists* claim him as favoring their side of the question, while the *polygenists* think he is a thorough diversitarian. We will hear him:

"The *unity of species does not involve a unity of origin, and diversity of origin does not involve a plurality of species.* These are two distinct questions, having almost no connection with each other."

Prof. Agassiz goes on to state it as his belief that men did not originate from one common stock, but from a number corresponding to what we see in the physical distribution of plants and animals.

This, however, in his estimation, does not prove that they are of *different* species, and, as a consequence, he suggests that, morally and intellectually, they are of the same species—or rather, humanitarianism considered, mankind are, so far as species are concerned, identical.

We have no disposition to call in question the views of one so learned in zoölogy, but zoölogists are not always archæologists. No one better than Prof. A. is aware that difference of origin—that is, origin under different physical conditions—would be likely to be attended with a difference in structure, or other attributes. This is true of plants, it is true of inferior animals, and we should have, *a priori*, supposed that it would have held true in relation to men. Men, it seems to us, in hyperborean regions, require an organization not exactly like what is possessed by those residing within the tropics. Is the female Hottentot identical in structure with a Caucasian female ? Nor do we see any point in the remark touching morality, intellect, etc. In these there is similarity, but we have failed to discover any thing like identity. One race, throughout all time, is progressive—another passive. The one, since any thing has been known of it, has been in a civilized state—the other has always been in heathenism.

Prof. A., it seems to us, has not illuminated this subject very much. Why should it be expected that he could ? It is one that is lost in the darkness that surrounds the beginning of the world. We are unconscious of our individual origin ; why should a nation be conscious of its ? Nothing is, then, more idle than an attempt at the positive solution of this problem. There are many, of good powers of thought, who are incredulous, but are unwilling to say any thing that would have a tendency to disturb the faith generally reposed by Christians in the Mosaic account. There are others, who support Christian institutions, but who think that the Scriptures warrant the belief in the existence, at the time the *race Adamique* was created, of other races.

We have thus passed very hastily in review, this *unity* controversy. Nothing, however, is more obvious than that proper views concerning it must grow out of other and more primary inquiries.

Do the races of mankind differ from each other physically ? Do they differ from each other morally and intellectually ? If such questions are decided in the affirmative, a presumption—nothing more—is raised that they may have had different origins.

However strongly appearances may contrast, a sentiment found in the New Testament teaches, it has been alleged, that out of one kind of material all the nations of the earth have been made. Here is the passage: "And hath made of *one blood* all nations of men for to dwell on all the face of the earth." We have it suggested by the very highest authority, that the word "*blood*" in this passage is an interpolation. Suppose, however, that it is not; it is evidently used in a figurative sense. It is simply a *metonymy*, where a part is put for the whole. We have it said that Adam was created out of the *dust* of the earth — a *metonymy* where the matter into which the body is ultimately resolved, is put for its proximate principles, or the chemical elements of its composition. Greek scholars tell us that the passage in question is properly rendered thus, "He hath made out of *one* all the nations," etc. We dismiss this subject without further remark, except that the Scriptures were designed, it seems to us, to unfold the most perfect and beautiful system of religion that the world has ever seen, but not to furnish information on scientific questions.

The question of identity of structure not then being solved by the Bible, in a way that is at all satisfactory to those most conversant with the original text, we must invoke the light of science.

Almost every part of the physical structure of the races has been made, at some time or other, the subject of investigation. Scientific examination of the differences, that from a cursory observation obtain, is rather, however, a modern enterprise. Although the ancients have recorded, by their actions, their belief in the doctrine that there are superiors and inferiors among nations, and that some are adapted to one kind of climatic condition, and some to another, they have left us no labors on the differential anatomy of nations.

The osseous frame-work—the skeleton, from the supposition of its superior importance in revealing differentia, has received most attention. Daubenton is among the first of the writers on the bones. He called attention to the various positions of the foramen magnum occipitus in the races. Owen, of London, has recently done the same thing. Camper investigated the "facial angle," and identified his name with it. John Hunter wrote his inaugural thesis on a kindred subject Cuvier called attention to the superfices of the cranium and face in man and the inferior animals. Blumenbach has written his work, *Decades Craniorum*, over a collection of sixty five skulls. On cranial peculiarities, he divides man into five types. Morton has written on the cranium, and has, among other things, called attention to his mode of estimating its capacity by cubic

inches. Pritchard wrote his Crania Egyptiaca in 1844. Nothing, more than hasty conclusions or crude generalizations, is calculated to retard the real progress of a science yet in its infancy. The ethnological inquiry, therefore, in its present stage, should be carefully guarded. From, however, the amount of labor bestowed on craniology, a proposition or two may be ventured.

1. That cranial characters constitute an enduring basis upon which to establish a true classification of the races of men.

2. That the value of such characters is determined by their constancy rather than by their magnitude.

3. That these characters in the aggregate constitute typical forms of crania.—J. Aitken Meigs, M.D.

These cranial characters relate to the *size* of the cranium, and its *form*.

We have time to pass in review but a slight portion of the labor of those who have occupied this field. Cuvier and Morton classify the races on the *size* of the cranium. Cuvier, to ascertain the size of the brain, measured the area of the cranium and face. He divides man into three stocks—Caucasian, Mongolian and Negro. He found the area of the cranium largest in the *Caucasian*—smallest in the ancient Peruvian and Negro. He also found the area of the face in the Negro to be greater than in the Caucasian.

Dr. Morton, who, perhaps, possessed, at the time of his death, the largest collection of crania in the world, divides mankind into *five* races. Recognizing the long established principle in physiology, that the brain is the seat of the mind, and that it is to variations in its size, texture, etc., that should be attributed the moral and intellectual diversity of the races, Dr. Morton called attention to the cranial cavity, and adopts a mode of measurement of the same by cubic inches. Applying this test to his large collection of skulls, it was ascertained that the Caucasian group had a mean internal capacity of 93 cubic inches; the Mongolian of 87; the Malay of 85; the Negro 82; Australian Negro, 75; the Toltecan, (ancient Peruvians and Mexicans,) of 80. Between the Caucasian skull and the Australian Negro, there appears to be a difference of 18 cubic inches; and between the Caucasian and Toltecan a difference of 13 cubic inches. To those who think there is any thing in quantitive anatomy, results of the character just noticed, are significant.

Camper, Blumenbach, Pritchard, Owen, rely mostly on the *form* of the skull, in making out classifications of men. As indicative of the amount of intelligence or capacity possessed by a race, or fam-

ily, Camper proposed the "*Facial Angle.*" This is displayed by two lines—one from the opening of the ear to the base of the nose, the other from the most advancing part of the forehead to the most protruding part of the upper jaw bone. Viewed in profile, the head and face, by this method, gives an angle that varies in different nations, and among inferior animals. Nations that have reached a high grade of civilization, possess a large "facial angle"—those that are uncultivated, have a small one. The Greeks, in the age of Pericles, had a facial angle of 90 degrees. The Caucasians have the largest—the Soudan population the smallest. In the latter, it is often not over 65 degrees. Perhaps the mean of the facial angle for the white race, would be 85 degrees; the mean for the black race, including the natives of Australia, 70—difference between them, 15 degrees.

More especially on the *shape* of the skull, Blumenbach and Pritchard have had their attention fixed. For ascertaining the breadth of the skull, and the projections of the face, the former proposed the "norma verticales." Says he, "The best way of obtaining this end, is to place a series of skulls with the cheek bones on the same horizontal line, resting on the lower jaws, and then reviewing them from behind, and fixing the eye on the vertex of each, to mark all the varieties in shape that contribute most to national character." According to this method, all the tribes of the earth are thrown into three great classes—those having the head and face of the *oval* or *elliptical* form; those having it of the *pyramidal*; those having it of the *prognathous.*

The *oval* form of the skull is so named because the conformation of the face and forehead is such as to give the face an oval shape. This form seems to be regarded as the most symmetrical—no undue prominence or depression. The head is round, the forehead high and expanded, the front teeth are fixed in planes parallel to each other. The head here is of the largest size, and the facial angle is the greatest. This form belongs to the Caucasian race—the most civilized of those who live by the arts of cultivated life. The *pyramidal* form of the skull is at once recognized by the great breadth of the face, large zygomatic arches, low, receding forehead, flattened occiput, flattened nose. The pyramidal form is typically exhibited by all of the yellow varieties of mankind, who in their habits are nomadic, various nations of northern and central Asia, and the Indians of America. It is seen in greatest perfection in the Eskimo.

Among the rudest and most savage tribes, we have the *prognathous* form of the skull. This consists in a narrow, retreating form of the forehead, a forward projection of the jaws, so that the upper and lower incisor teeth are set at an obtuse angle to each other, and a large development of the cavities for the accommodation of the organs of special sense. The cranial cavity, as we have seen, is smallest here, and the facial angle, owing to the forward projection of the jaws, is very much less than in either of the other divisions. This form obtains, and reaches its greatest degree of development in the degraded members of the African nation, and in the native Australians.

All of these modes of investigating the most important part of osteology—the cranium—with reference to race diversities, bring us to the same conclusions—men differ from each other in the *size* and *form* of the brain, and a classification founded upon these characters may be made that is truthful for the historic period. As long as any thing has been known of the Caucasian, he has had the same cranial characters; and the same may be said of the Mongolian and African.

We might, in this connection, call attention to other portions of the osseous system, but our limits on the present occasion will admit of but the remark, that the principal cranial types are invariably accompanied with peculiarities conforming to them, in other portions of the skeleton.

It is not alone in the solid frame-work of the body that differentia obtain, marking the races, and that dispart them so widely, but in the color of the skin, the hair, odoriferous glands, etc.

The color of the skin is no accident. Whether *yellow* or *black*, it is the result of a secretive apparatus situated in the substance or texture of the skin. The organ being made up of three layers—the *epidermis*, the *rete mucosum*, and the *cutis*—the middle one, or rete mucosum, has the office of separating from the blood a pigment, which is black in the Negro, and yellow in the American Indian. This secreting apparatus in the skin, for giving complexion to the black and yellow races, is as much of an entity, as positive in its existence, and as invariable and uniform in its action, as the apparatus in the eye of all races, for secreting *pigmentum nigrum*. Unless affected by disease or amalgamation, the color of the skin undergoes no change. It is the same in the Indian of to-day that it was when Columbus discovered the continent; and the African

has the complexion now that he had when the Pharaohs governed Egypt.

A distinction of the races has been insisted on, because of the characters that obtain with reference to the hair. The hair of the negro, in appearance, contrasts very strongly with that of the white man. The most trustworthy observations favor the popular presumption that there is a radical difference. In the Negro, the hair is eccentrically elliptical in section, whereas in the European it is circular or oval. The hair of the Negro is crisped and wooly—that of the white man straight and flowing, or curled.

There are other points of equal significance, differentially, as the odoriferous glands, color of the eyes, convolutions of the cerebrum, position and size of the calf of the leg, form of the lips, of the nose, form of the feet, etc., but we pass on.

What we have enumerated with reference to the bony skeleton, or the soft parts, indicating radical diversity of structure, although well understood as having positive scientific value by those competent to the investigation, and although practically made the bases of social and national distinctions, still the subject seemed not to be fully understood and appreciated until since the labors of Alexander Von Humboldt on *Physical Geography.* By common consent, the race diversities that obtain, were attributed, if attempts were made to account for them at all, to food, habit, and climatic influences. As a consequence, much was written on the philosophy of man from the assumed stand-point that he is the creature always of circumstance, but very little on him that was entitled to the name science. How he is organized with reference to the climatic agents with which he is surrounded, is a question upon which the researches of Humboldt are valuable.

It is well known that Humboldt and Bonpland made application to the Spanish government, at an early period in the travels of the former, and obtained permission to travel for the purpose of making scientific observations, on the geology, geography, flora and fauna of Spanish America. They left Madrid in May, 1799, in the vessel Pizarro. The captain was ordered, not only to receive the travelers on board, but to provide a safe place for their instruments, and also before sailing to Mexico, whither the vessel was bound, to touch at the port of Orotava in the Canaries, and allow time to ascend the peak of Teneriffe. On approaching the Island of Teneriffe, the weather was so hazy that the peak was invisible. After landing,

they first visited the celebrated *dragon tree,* the trunk of which they found to be forty-five feet in circumference. Humboldt considers this tree to be one of the oldest inhabitants of our globe. In aspect, he says, "it forcibly exemplifies the eternal youth of nature, which is an inexhaustible source of motion and life." The ascent of the peak occupied two days. Leaving Orotava, the travelers ascended through *successive circles* of vegetation. Passing from the *cocoa palms,* on the sea shore, they successively encountered, in the order here stated, the *chesnut, heath, fir,* and *fragrant retama* at the base of the crater. These observations by Humboldt, gave him the first idea of those researches into the geographical distribution of plants and animals, which entitle him to rank as the founder of this branch of cosmography. The inspirations of Teneriffe were confirmed on the slopes of the Andes, and, years afterwards, on the dreary wastes of Siberia. He perceived that the inorganic forms of nature, such as mountains and rocks, resemble each other in the most distant parts of the earth, while the organic forms, plants and animals, vary according to climate, character of the soil, altitude above the sea, and other local influences.

We repeat that, notwithstanding all the initiatory steps taken by Blumenbach, Camper, Pritchard, etc., for inaugurating an ethnological inquiry, but little real progress was made until the attention of the world was called to the great law—the physical distribution of plants and animals—the distribution according to climate, as set forth by Humboldt. If it is susceptible of proof that plants and inferior animals are not cosmopolites—do not flourish equally well in all latitudes, but are adapted to "natural provinces," or zones—a very strong presumption is raised that the same is true with reference to the *genus homo.*

From the manner in which mankind have been, and are now distributed over the surface of the earth, the view just mentioned receives some support. In the *temperate zones,* we have the Caucasian stock—the stock distinguished for large heads, large cranial cavity, large facial angle, the greatest development of the intellectual and moral faculties, for cultivation of the earth—for every thing, indeed, pertaining to sociology; and, we may further add, a race characterized, in all ages, by its predatory proclivities, its tendency to encroach on the rights of others. Within the historic period, this race has been confined mostly to the northern hemisphere, and between the fortieth and sixtieth parallels of latitude. Its pliability

of constitution admits of migration either north or south, some twenty-five or thirty degrees from its geographical center. Such changes, however, if made permanent, are sooner or later followed by mental and physical degradation and death.

Around the Arctic ocean, we have the type of humanity known, in North America, as the Eskimo, in Northern Europe, as the Laplander, and in Northern Asia as the Samoiede. This race, whether found in Europe, America, or Asia, is made up of the same ethnological elements. In it we have the medium sized head, the pyramidal form of skull, the square face, and the brownish yellow skin. It is further characterized by Nomadic habits, and the patriarchal form of government.

Within the tropical regions, we have the Negro race. This is true of most of the tribes of Africa and Australia. The race, as far as any thing can be known, reaches its highest development in Soudan or Australia. We have here the *prognathous* skull, the smallest cranial cavity, the most diminished facial angle, the largest face, the black skin, and crisped hair.

Now while the three leading types of mankind, seem to be the occupants of the torrid, frigid and temperate zones, there are other types—perhaps modified forms of the Eskimo, as the Malays and American Indians, whose geographical range is much greater. Still, the great natural law, that a race of human beings, like tribes of inferior animals, and families of vegetation, has its realm, or province, in which it flourishes, and to which it is adapted, has but few exceptions.

We have some facts bearing on this subject, that partake of a medical character. Climate is frequently invoked in the cure of disease, and it is axiomatic that what will cure disease, may, under other circumstances, produce it.

Is, then, man a cosmopolite? Can he migrate with impunity through all latitudes. Can the Eskimo leave his perpetual winters, his snow plants, (Palmellacæ,) his dogs and sledges, and take up his residence in Soudan, or on the banks of the Congo or Zambesi rivers, and there "multiply, and replenish the earth?" Or can the African migrate to Hyperborean regions, construct snow houses, and live and thrive in them with the Eskimo? Are, indeed, there any facts in history indicating such pliability of constitution in either race?

Observations have not accumulated in sufficient abundance to set-

tle positively such questions. What are on hand, however, favor negative answers.

After the war with America, England dismissed quite a number of colored people from her army and navy, and colonized them on the Western coast of Africa at Sierra Leon. After spending £3,000,000 in the attempt to get a permanent foothold for the colony, the unhealthiness of the climate to Europeans was such that the enterprise by the agency of the white man was abandoned as impracticable, and has been committed to the hands of the natives of the country. The English troops necessary to protect the colony from the native savages are now all withdrawn, and their places supplied with men of color. Americans have a colony at Liberia, established in 1821. But Yankee constitution, with all its power and pliancy, has proved unequal to the climatic emergencies of the country. So great has been the mortality among the officers of the colony and those who attempted to penetrate the interior, that, like the English, we have given up the work as impracticable.

Portugal, in latitude averaging about 40°, sent, at an early day colonists, who settled on both coasts of South Africa. As they are now found by the traveler, they seem to be dwarfed, morally and physically, and it is supposed they would long since have *run out* had they not been continually replenished from the mother country. The Portuguese are said to possess greater ability in adapting themselves to climate than any other nation—still they wither in Africa.

The French migrated across the Mediterranean to Algiers, only a few hundred miles; and in 1830 the country was entirely subjugated, and a colony of French subjects planted on ancient Numidia. The short time that the colony has been in existence has demonstrated its unprofitable character, human life being taken into account. The annual mortality of the French colonists is now 7 per cent. It should be recollected, also, that the French expose themselves as little as possible to the climate. The drudgery, field-labor, etc., has always been performed by the native Arabs and Kabyles. Were the French to labor the mortality would soon rise to a point threatening speedy depopulation. Understanding this the mother country, for the purpose of sustaining the agriculture of the colony, engaged in the "Cooly Trade," an attempt to get laborers better adapted to the climate.

The triumphant war of 1756 gave England a decided pre-eminence in India over other European powers. About the same time

she began to acquire territorial possession in Hindoostan. These conquests have made it necessary, for more than a century, to keep a standing army recruited at home in order to maintain her dominancy in the distant country. With the effects of the climate of India on British officers and soldiers we have now about one hundred years of experience. At home these officers and soldiers were north of the fifteenth parallel of latitude; in India they are south of this thirty degrees. What now have been the effects of this change of climate on the English constitution. An officer of the East India Company, with a large experience, says that English regiments die off prematurely, and that acclimation is impossible, that it is only another name for shriveled muscles, impoverished blood, etc.; that long residence affords no immunity, but, on the contrary, the mortality among officers and soldiers is greatest with those who remain longest in the climate. The annual mortality varies but little from 6 per cent. Marriages with British females have always been encouraged, yet the oldest purely English regiment, the "Bombay Tufts," has been unable to raise any children.

Since any thing has been known of Egypt, which as all know is between the twentieth and thirtieth degrees of north latitude, no European, or even Turk, has ventured to perform, to any extent, field-labor. The Fellahs, the true descendants of the ancient Egyptian race, are the working-men of the Nile. Negroes have always been in the country, but they incline entirely to menial service, and are less healthy than in Negroland. The Copts, a mixed race, are a worthless part of the population, inhabiting now, mostly, the upper part of Egypt. The Mamelukes, a turbulent, war-like race of white Caucasians, as is well-known, were sold to an Egyptian king as slaves. They finally succeeded to the political power of the country, and after ruling for nearly three centuries, Mohammed Ali subdued them. They are an exotic race, and are now fast decaying from the influences of African climate.

Dr. Livingstone, who has lately instructed us all on South Africa, tells us that during his stay of sixteen years in that country, he suffered thirty attacks of fever. As a pretty fair index, to the influence of the South African climate on Europeans, we give the following, which occurred on the eastern shore of the continent, near the mouth of the Zambesi river:

"A Hamburgh vessel was lost near the bar before we came down. The men were much more regular in their habits than English sailors, so I had an opportunity of observing the fever acting as a slow poison.

They felt "out of sorts," only but gradually became pale, bloodless and emaciated, then weaker and weaker till at last they all died except the Captain, more like oxen bitten by *tse-tse*, than any disease I ever saw."—LIVINGSTONE.

We have within the limits of the U. States elements of a physical character which, if properly invoked, cannot fail to shed some rays of light upon the subject under consideration. Our boundaries, from Maine on the north to Florida on the south, extend through more than 24° of N. latitude, covering an area of about 3,300,000 square miles—traversed by two great systems of mountains that reach in some places an altitude of 10,000 feet above the level of the sea, and by rivers of unrivalled magnitude—almost every circumstance, or meterological condition, is furnished by which to assist in unfolding the relations of man to the agents that surround him.

The ethnological programme is a short, and, to some extent, tragic one. A representative of the Caucasian race discovers the continent, then returns to Europe and makes a report on the soil, climate, and character of the autochthon population. Thereupon, all the leading branches of the race, obeying their instinctive impulses, commence the work of migration; and no sooner on the continent than they become impressed, like Abraham with reference to Canaan, that the land was made for them and their posterity. At first they beg quarters from the natives, then coax them out of the necessary territory for a foothold. This attained, the work of extermination is at once inaugurated, and so thoroughly has this been carried on that we can scarcely now find the skull of an Indian for craniological researches.

The place of the Native Americans is now occupied principally by two branches of the Caucasian family, the Celtic and Germanic; and by no inconsiderable number of Africans.

Within the short period of the settlement of the country, the two white branches have demonstrated that their capacity for agricultural labor is confined to the northern states, to the climate of which their constitutions seem to be adapted. The climate here has its analogue in the one from whence they emigrated; and the statistics of mortality show that their longevity differs but little, if at all, here from what it was at home.

What the exact capacity of Germans and Celts for labor in the Southern States—for field labor between the 24th and 36th degrees of latitude, is a question that will need time for its complete solution.

Either from instinctive impulses, or from actual experiment on *a priori* decision of the question has been made; and as a consequence Africa has been put under tribute for laborers with which to cultivate the soil. The white man in the Southern States, like formerly in the West Indies and now in Algeria and Lower Egypt, has constituted himself a mere cypher so far as digging the earth is concerned, depending entirely upon the labor of an exotic race for which socially he has no sympathy, but on the contrary a most invincible repugnance. The white man has taken the relation, indeed, of master; the African that of a slave laborer.

Here, then, we have two races, strongly contrasted, living together in the same climate. The one in a position favorable to the protection of health; the other exposed to whatever there is in the climate calculated to shorten life.

Notwithstanding this social advantage of the position of the white man, he fails to live out the length of his days. His life as compared with his own race, in the Northern States, is shortened. The white race, it appears, attain their highest intellectual and physical development, and most perfect health, above latitude 40° in the Western, and 45° in the Eastern Hemisphere.

Pritchard remarks—"The warmer the climate, other circumstances being equal, the shorter is the average duration of human life." This seems to have a striking application to the white race. Setting aside malarial influences, the white man lives longer in Boston or Scotland than at Calcutta, Bombay, or Jamaica. At Bombay, the annual mortality of Europeans, in 1815, was 1 in 18; in Great Britain, the annual mortality, from 1800 to 1804, was 1 in 47. Indeed, Pritchard's observation is confirmed by all the migrations of the Caucasian race to Equatorial regions. The statistics of longevity, in the Southern States, are imperfect with reference to the white man. Enough, nevertheless, is indicated by the influence of the climate on fresh immigrants from European countries, to inspire a well grounded suspicion as regards salubrity. The malarial regions are deadly occasionally upon even old residents, and always so upon new comers. But even in localities elevated and non-malarial, the ruddy complexion of the New Englander fades, his muscles shrink, and a general languor takes possession of his body.

The imperfect data before us, then, seem to favor, very unmistakably, the decay of the white race in the Southern States. This natural law is, to some extent, modified by the avoidance, as much as

possible, on the part of the planter of labor, and by his removal during the summer to the non-malarial localities. But what more than any thing prevents the full expression of the natural law of depopulation, is the draughts made upon the northern states. The stimulus of gain is something the Yankee nation has never learned to resist, and until this lesson is taken the south will most likely continue to draw upon the north for supplies of flesh and blood.

What now are the effects of the climate of our Southern States upon the African race? It is now about 240 years since the first importation of men of this race took place, and we now have in the country about 4,000,000.

From a table showing the number of deaths, for each year, among the colored population of Charleston, S. Carolina, we find that the average mortality for a period of ten years is, 1 in 43·6. And while the whites, in a nearly aggregate population, give but 15 deaths between 90 and 100, the black population for the same period, of ten years, give 101 deaths between 90 and 100 years of age. Again, while the whites give but 1 death, for the same period, above 100, the blacks give 38 deaths above 100.

The average annual mortality for the whole negro population is set down in the census of the U. States, taken in 1850, at 1 in 60. This is undoubtedly below the proper mark. It goes, however, to show, in connection with State statistics which are more reliable, the great duration of life of the slave population in the slave holding States. Proceeding north, where statistics are reliable, the duration of life of the black man diminishes. In Boston the annual deaths of the colored population are put down at 1 in 20 ; in N. York they are less, and still less in Philadelphia. This is about the mortality, as we have seen, of Europeans in India, at Calcutta; or on the western side of the peninsula, at Bombay.

We know of no data by which to estimate the annual mortality of the African race in Soudan or Southern Africa ; but, other things being equal, it is probable that it is less than upon any portion of the American continent.

If it were proper, in the present state of our knowledge, to deduce inferences from our imperfect experience with the effects of climate upon the different races, they would sustain very decidedly the theory of "Natural Provinces" for the genus homo, as well as for the inferior animals and plants. In its natural realm a race lives out the length of its days, and gives an exhibition of its capabilities and

idiosyncrasy. If susceptible of civilization and refinement, of progress in the arts and sciences, the evidence will never fail to make its appearance. On the other hand, if out of its proper geographical realm, it becomes impotent, unhealthy, and sooner or later extinct.

An opinion has reached considerable currency that the tribes of the Mongolian type, in the extreme arctic regions, and those of the European near the Equator, are mentally and physically dwarfed by the climatic influences with which they are respectively surrounded. It is supposed that the Esquimaux is in a state of continual struggle with a stern and rugged nature ; and that the native African has all his energies relaxed and crippled by the hot burning atmosphere in which he lives. As a consequence, we find humanitarians being much exercised over what they regard as the hard fate of these races.

We have no disposition to attempt an abridgment of such praiseworthy impulses, but we regard it as by no means settled that they have in reality any foundation. Either climate would be intolerable to us; but is our case the rule for measuring its agreeableness or disagreeableness to others. The African, after a hearty meal, lies down in an atmosphere filled with deadly vapors to the white man, and at a temperature of 150° Fah., and sleeps soundly and sweetly, dreaming, perhaps, over the gastric supplies of the next day ; the Esquimaux fills his stomach with oils and animal food, wraps himself up in his furs, and retires to his snow house with his dogs, as well satisfied with the temperature of 40° below zero, as if only at the freezing point. We have no vital statistics in regard to either of these races. We do not know but what they live out the length of their days, just as we do. Their plants and animals die when made to conform to our standard of climatic excellence, and why also would not they? The truth is, these races are just where they were designed to be, and if they are not happy it is their own fault. There is no probability, as far as we can see, that their lives would be lengthened, or their enjoyment promoted, were they to take up their residence within the temperate zone.

We now approach the most knotty part of our inquiry—

Are there any physical agents, which, operating for a series of years, are adequate to the production of the race peculiarities we have had under consideration?

The discussion of this question involves historical research, scien-

tific observation, and zoölogical experiment, to an extent that scarcely leads us to hope, at present, for any thing entirely accurate.

The distinctions, moral, intellectual, and physical, now recognized among nations, are regarded as being due to climate, habits, or to food, or to these combined. The potency of climatic influences is looked upon, by one of the most learned ethnographers, as being in every way competent to account for all the distinctions found between a perfect Caucasian and the most degraded African.

In the absence of the data by which to investigate thoroughly the correctness or incorrectness of such a conclusion, a good degree of caution may be observed in the expression of opinions by those the most competent. All accord to climate the power, if a sufficient length of time is allowed, of working certain changes on all forms of organization, vegetable and animal. These changes, so far as animals, including man, are concerned, have, however, their limits. It is known that Europeans become tanned under a tropical sun, and that the Yellow races grow darker if removed from a temperate latitude towards the equator. The children nevertheless, in both instances, are born with the primitive caste—the acquired taint is not propagated. The dark races, on the other hand, get no fairer by migrating to the north, nor are the children brighter. The physical modifications, including even divergent cranial types, among what are known as mongrels, are due to amalgation, and can always be traced to this, rather than to climate.

The inhabitants of Iceland are of Teutonic origin. They have been in their hyperborean locality for more than 600 years. They have not, however, during this length of time acquired either the olive brown skin, or the pyramidal skull of the Esquimaux.

The Boors of South Africa, another tribe of Teutonic origin have been in their present location for about eight generations. The present generation, Dr. Livingstone tells us, has the original fairness of people of the mother country.

Monumental history has within the present century been invoked with reference to the mutability of races—or perhaps it would be more proper to say, that, incident to the labors of certain archælogists in Egypt, Italy, Assyria, Persia, and other countries, some very valuable evidence has been developed.

The Egyptian, the most renowned nation of antiquity, furnishes some iconographic specimens that were made as early as the third Pharaonic dynasty—or about 5,500 years ago. Sculpturing was

cultivated, as appears by the Egyptians, according to their own style, from the time mentioned until the nation succumbed to Greek influence. During all this time the artists of the country were in the habit of representing on the monuments a number of things. The different varieties of the dog. as the grey-hound and the bull-dog, and the different varieties of birds are figured, all of which look like the dogs and birds of to-day. But few portraits were made of individuals. The race peculiarities, nevertheless, were made to stand out with great fidelity. For example, in the celebrated tomb of Menephthah, the Egyptian king at Thebes, is sculptured *four* types of mankind, the *red, yellow, black* and *white.* This is generally called the tomb of Belzoni, after the Egyptologist of that name. We have lately had brought to light a relief in the sepulchre of *Darius*, in Persia, on which is sculptured four types, a *Lydian, Scythian, Negro* and *Chaldee*, designed to represent the four different nationalities subject to this king. These monumental types hewn in the rocks, some of them five or six thousand years ago, are identical with the races they were designed to represent of to-day. The form of the skull and physiognomy of the monumental Egyptian, Scythian, Persian, or Negro, are the same as characterize these types now. Indeed, we possess effigies of negroes drawn by six different nations of antiquity: Egyptians, Assyrians, Persians, Greeks, Etruscans and Romans, which all speak for the unalterable constancy of the negro type. (PULSKY.) The prognathous form of the skull, thick lips and black skin, seems anciently to have been what it is found to be at the present day. The Jewish head in the days of Abraham is the type around which all the heads of this race, it matters not what circumstances it has been placed in, revolve. The long oval cranium, aqualine nose, receding forehead, long distance between the nose and mouth, of the ancient Egyptian characterize the Fellah now in the valley of the Nile.

From the facts adduced, and many more might be given, it seems very improbable that climate has made the Negro black or the Caucasian white. The monumental records are conclusive on the fidelity of race distinctions for a period equal almost to the reputed age of the world. If, therefore, climatic agents have proved impotent for this long period, what reason is there in supposing them capable of ever accomplishing such results.

So far then as physical agents are concerned, there is no probability, from all that can be known, that they have produced the peculiarities which now distinguish the races. We must admit that the

types were created as now found in the different zoölogical provinces; or we must seek for other causes more adequate than climate to their production.

The following we offer as a *résumé:*

1. The *Unity* of species question is one that cannot, by any known means, be solved. A nation, like an individual, knows nothing of either its birth or its death.

2. Diversity of origin, which it is supposed does not imply *plurality* of *species*, seems to be indicated by the geographical distribution of animals and plants.

3. In each of the great geographical divisions of the earth, peculiar types of mankind are found which, in each instance, seem to be physiologically adapted to the locality.

4. The inhabitants of one realm possess *specific physical* characters that differentiate them from the people of other realms.

5. The moral or intellectual status of a race has a very intimate relation to its geographical location and physical conformation.

6. No physical causes are known to which the race diversities which now obtain may be reasonably attributed. Climate is inoperative, except to a limited extent.

7. Monumental history makes it probable that the types of mankind have underwent no change, from any cause, for a period of at least 5,000 years.

Terrence McQueeney vs. *W. W. Jones. A prosecution for alledged Mal-Practice. Tried at the November Term*, 1858, *of Lucas Common Pleas:* E. D. Potter and Louis H. Pike, *Attorneys for Plaintiff;* D. O. Morton and J. R. Tyler, *Attorneys for Defendant.* Reported by the Defendant.

Plaintiff claimed $10,000 damages of defendant as a surgeon, for negligence and want of skill in attending him for an injury of the ankle joint of the left leg, and fracture of the same ; and also a fracture of the right leg below the knee, which the defendant had failed to discover.

Plaintiff testified that he was run over on the 19th of January, 1854, by a train of cars on the M. S. & N. I. Railroad, he falling on the inside of the track, and the cars passing over both of his legs below the knee, dislocating and breaking his left leg at the ankle

joint; that the dislocation had never been reduced or set, and that in consequence he was lame, &c. One of the medical witnesses for the prosecution, testified "*that there was a dislocation of the left foot outward upon the ankle, and that it had never been reduced, and that it could have been reduced. That fracture of the fibula just above the ankle joint occurs with almost every sprain, and is a matter of common or frequent occurrence;* he had not seen the patient while under treatment by defendant." Two other physicians were also called by the prosecution, who testified that not having seen the patient while suffering under his injuries, they could not say what were the conditions, and were not prepared to say what could or should have been done.

Previous to the introduction of defendants testimony, his attorneys moved the Court to dismiss the case on the ground that plaintiff had failed to make out his case in law. Court overruled the motion on the testimony of defendant and Dr. Isaac N. Hazlett.

Defendant proved "that three loaded cars had run over both of plaintiff's legs, in a diagonal direction, from just below the knee of the right leg, over the ankle of the left, dislocating the tibia inwards and turning the foot outward. That the right leg *was not broken*, but very badly lacerated, and sloughed for three or four weeks, abscesses forming at four different points. That the left fibula was fractured at about two or three inches above the left ankle joint, and that the laceration and bruises were so great as to indicate the sloughing which subsequently occurred, and communicated with the joint. That defendant then, and repeatedly afterwards, informed plaintiff that if he could succeed in saving his legs from coming off, that the left one would be imperfect, and he must have no expectation of its being anything but crippled.

"That the dislocated foot was reduced and kept in place on a double inclined plane splint, with a foot board; that lateral pressure could not be kept up perfectly on account of the sloughing; that irrigations of tepid water were used continually on both legs for about two weeks, until the violence of the inflammation had subsided. That the fibula did not unite at its broken ends at the end of two and a half months; and that defendant went up, by previous arrangement, at the end of that time to irritate the ends of the broken bone with an awl, for the purpose of exciting such action as would have a tendency to make it unite; that plaintiff's wife aroused the neighborhood, and brought in several men armed with clubs, to resist the defendant in the discharge of his duty towards his patient, and threat-

ened his life if he did not desist; that plaintiff himself then refused to permit defendant to proceed, and said that he would take the risk; that defendant urged plaintiff to consent to the trifling operation, as his own reputation, as well as plaintiff's welfare, was at stake, but plaintiff declined; whereupon defendant declined any further attendance upon him; that the fractured ends of the fibula having failed to unite, and the lateral pressure not being kept up by a splint upon the outside of the leg, the bones would naturally fall against the tibia at their fractured ends, enlarging the articular space between the malleoli, and present the same appearance that now exists, viz: The foot turned slightly outward, and the joint enlarged."

A year and a half after the injury an ulcer appeared upon the crest of the tibia of the right leg, and the bone exfoliated, which it was contended was the surgeons fault—plaintiff having set up in his petition that this had been a comminuted fracture of the tibia, which his surgeon had failed to detect, but to which his informant on the trial failed to testify!

After the case was argued by the attorneys, defendant's counsel asked the Court to charge as follows:

1. That the medical man engages that he possesses a reasonable degree of skill, such as is ordinarily possessed by physicians generally.

2. He engages to exercise that skill with reasonable care and diligence.

3. He engages to exercise his best judgment, *but is not responsible for a mistake of judgment.*

4. That a medical practitioner is not responsible for the result, or does not insure the result.

5. That the patient himself is responsible for all else, if he desires the highest degree of skill and care he must secure it himself.

The Court (Judge John Fitch) charged on all the points as desired except the third point, striking out the word "not," and ruling that he was responsible for mistakes of judgment, illustrating it by saying, *that if a physician were to give a patient arsenic by mistake and death were to ensue, he would be responsible, and the consequences of a mistake of judgment must be taken into consideration by the jury.*

Verdict for defendant.

Ovariotomy—Two Cases. By J. W. Hamilton, M.D., Professor of Surgery in Starling Medical College.

Case I. This Case was operated on April 20th, seventeen weeks ago. The patient was Miss W., of Athens co., Ohio, aged 24. A slight tumor was noticed in the left illiac region, about a year previously. This was soon lost in a general enlargement of the abdomen. At the end of seven or eight months the distension of the abdominal walls had become so great as to demand tapping, which being performed 25 pints of fluid escaped, leaving a tumor of some size, in the left hypochondriac region. The sac refilling rapidly was again tapped about the first of March, discharging about half as much fluid as on the former occasion, and leaving a very large, apparently solid mass above and to the left of the umbilicus. As the fluid escaped the internal extremity of the canula was very much depressed.

Our first examination of the case was about the first of April. The patient evidently inherited a slight scrofulous taint. Was emaciated, especially about the face. Menstruated regularly. Aside from the usual effects of the interference of the mass with the surrounding parts, she was in very fair general health. The abdomen was quite symmetrically enlarged, presenting very distinct fluctuation over a large part of its surface. In the left hypochondriac and lumbar regions, however, there was no obvious fluctuation, the indications being rather those of a solid body.

In the performance of the operation we had the assistance of Dr. Geo. Carpenter of Athens, Dr. Reeves of Springfield, Dr. Pullen of Logan, and Drs. Dew, Fuller, and Pratt of Athens co.

A cathartic dose and an enema were given by way of preparation. The incision was from the umbilicus to the pubes, about 8½ inches in length, the patient being in a state of anesthesia. The linea alba was not in the median line, so that our incision fell upon the inner margin of the rectus muscle of the right side. Although the dissection was conducted in the most careful manner, the cyst was not recognized till it was entered. A cunula was then introduced, and the largest sack emptied of 2 or 3 gallons of clear ascitic looking fluid. This left a mass above suggestive of the presence of an immensely enlarged spleen. The openings in the peritoneum and sack were immediately enlarged, so as to admit the finger, which at once recognized fluctuation. The trocar being introduced no fluid escaped. The finger being now used as a director, the presenting

cysts were slit up with a probe pointed bistoury. Their contents being semi-solid, it was found necessary to scoop them out. The tumor being thus very materially reduced in size, the hand was introduced and the adhesions separated without difficulty. The pedicle was of the size of the thumb, and was transfixed and ligated in two lateral halves.

The tumor, including its contents, weighed 30 pounds. More than half the mass consisted of a single cyst; the balance of an aggregation of a vast number of pediculated small cysts, the consistence of the contents of which, was that of calves-foot jelly. The colors were exceedingly various.

A catheter being introduced in the outset, the urethra seemed to be remarkably long, and to curve around toward the left side. In the course of the operation, the uterus and bladder were found to have been drawn upward and to the left, so as to rest in the left illiac fossa.

The external wound was closed by the introduction of 7 or 8 interrupted sutures of silver, carried through close to the peritoneum. The small size of the greater part of the cysts, and the semi-solid character of their contents, rendered the operation somewhat tedious, twenty-nine minutes being occupied in its performance. Morphine was given in liberal doses, and its continued and liberal exhibition provided for.

The after treatment, during the five following weeks, was entirely under the care of Dr. Reeves. The external wound closed at once, but extensive peritonitis, with more or less suppuration supervening, subsequently separated, through its whole extent. After several weeks of grave traumatic fever, the wound again commenced uniting. At the end of 5 weeks it had healed with the exception of about an inch, at its upper extremity; and the case had assumed so favorable an aspect, that Dr. Reeves did not see it for some days. During this time, unfortunately, a portion of intestine became strangulated in the cicatrizing wound and sloughed, giving rise to a fecal fistula. This, however, was not followed by occlusion of the intestinal canal, fecal evacuations per anum not being suspended. This again became the source of great depression and suffering.

We learn, by letter, from Dr. Reeves, dated July 13, that the patient was then rapidly recovering, although there was still some fecal discharge through the fistula.

On retiring to examine the morbid mass, within less than 2 hours after it was removed, that part of the fluid contents which had been

exposed to the air in buckets, was noticed to have a very perceptibly offensive odor, that of sulphureted hydrogen being prominent. In the course of the operation there was free escape of this into the peritoneal cavity, and being quite pasty in character, it was impossible to remove it perfectly. We suppose, that undergoing decomposition from atmospheric contact, the grave fever which followed was a toxic effect of it.

Case II. In the investigation of this case, as well as in the operation, our friend Dr. J. B. Thompson, of this city, was, at our request, associated with us, and in every way bore a full share of the responsibility. We were furthermore assisted by Drs. Anderson, Price, and Black of Guernsey co.; and Drs. Brown and Portney of Tuscarawas.

The patient was Mrs. Neel, aged 47, of New Birmingham, Guernsey co., Ohio. Mrs. N. was the mother of 9 children, the youngest of which was 6½ years old. Two years previously she received a blow from the elbow of a child, which producing severe pain, fixed her attention, for the first, upon a round swelling, in the right illiac region, of the size of a fist. This increased in size, but soon lost its definite outlines. In developing it ascended to the right hypochondriac region, and thence downward and to the left. Fourteen months previous to operation the abdomen was enlarged, so as to lead several excellent physicians to the diagnosis of ascites, for which tapping was performed twice, a pint or two of fluid being discharged on each occasion. For the last few months, previously, the prevailing diagnosis was that of ovarian disease.

At the time of the operation the patient was greatly reduced in flesh, with corresponding impairment of strength and digestion; the stomach was totally incapable of receiving more than 3 or 4 ounces of nourishment; the patient was unable to maintain the erect posture for more than a minute or two; could walk, by the greatest exertion, only from 2 to 4 rods; had not been able, for a length of time, to turn over, or raise herself, when recumbent; and could only maintain this posture for about an hour at a time. The abdomen was very greatly and quite symmetrically distended; its circumference was just four feet, the superior portion presenting distinct fluctuation. The lower two-thirds of its parieties presented elasticity without fluctuation, and were greatly thickened by serous infiltration, especially just above the pubis symphisis. Two or three obscure sulci radiated from the region of the umbilicus. A

diagnostic tapping being performed above the umbilicus, a sharp jet of a few ounces of limpid serum followed. Carrying a director through the canula, elastic resistance was encountered, which gave way under slight pressure, and was followed by the discharge of serum, to the extent of a few ounces, presenting the appearance of strong coffee. In this way several septa were ruptured, giving rise to an equal number of varieties of fluid.

Percussion produced no resonance except in the epigastric, and left lumber regions. The abdominal cavity being thoroughly distended no mobility in the tumor was detected.

Examinations per vaginam and rectum, by the touch and Simpson's sound, indicated everything healthy and natural, except that the uterus seemed to be retroverted. The patient had ceased to menstruate: such cessation was probably independent of the ovarian disease.

The evidently compound cystic character of the tumor—its very great size and rapid growth—its recent origin—the absence of satisfactory proof of former peritonitis—the rapidly increasing interference of the mass with respiration, digestion and nutrition, and a rapidly approaching fatal termination, were assumed as sufficient grounds for deciding in favor of the feasibility and necessity of an extirpation.

The patient being anesthetized, an exploratory incision, an inch long at its bottom, was made just below the umbilicus. Although firm adhesions were found, it was determined to proceed with the operation. The parieties were at once laid open from a point several inches above the umbilicus to the pubes. The serous effusion was such, as that the lower part of this was three and a half inches in thickness. On passing through the peritoneum, a great number of cysts, from the size of an orange down, presented themselves. These were freely divided with the knife as fast as they could be reached. The separation of the surface of the mass was proceeded with as rapidly as the slowly diminishing size of the tumor would admit of the advance of the hand. Thus the parietal peritoneum, the omentum, and transverse colon were successively separated. Getting the hand around the mass, it was found free from attachments posteriorly. As it descended it encountered a firm, smooth, serous reflection that at once was recognized as impassable. Introducing the other hand from the left side, and carrying it towards the same point, to our very great relief, we passed smoothly behind,

without opposition. Dipping into the pelvis, we found it occupied by a single cyst, with only moderate attachments. The pedicle was small, but very vascular, and so spread out as that it was deemed best to secure it by two transfixions, and an equal number of double ligatures. An effort was made to bring the pedicle out at the lower extremity of the incision and fix it there, but owing to the thickened condition of the parieties this could not be effected; accordingly, the threads only were brought out. Twelve interrupted sutures were introduced. The latter part of the operation was performed amid the most serious apprehensions for the safety of the patient. At the time of leaving, five hours afterwards, there was quite complete reaction.

As the bowels were loose and the rectum empty, from a recent cathartic dose, no preparatory treatment was used, except a gr. and a half of opium, an hour before the operation. An equal quantity was given on its completion. It was found necessary, in the course of the operation, to extend the external incision to the ensiform cartilage, making it, in the distended state of the abdominal parieties, full twenty inches in length. All the abdominal viscera were freely exposed and handled. The liver was found displaced, the right lobe falling down far into the right lumber region. The left half of the diaphragm was left apparently without support, the heart playing upon and shaking it in a frightful manner. The patient, at this stage, reminded one, very forcibly, of an eviscerated subject, upon the dissecting table.

Our notes, from the date of the operation, are in the form of letters from the attending surgeons, Drs. Anderson and Price.

"For the first two weeks after the operation, but little was done, beyond the regulation of the diet, and the liberal and continuous exhibition of opium. The bowels were then moved, for the first, by injections of warm water and molasses. On the eighteenth, and twenty-fourth days, the ligatures came away. About this time there was vomiting, diarrhœa, and an accelerated pulse, which however disappeared on the escape of the last ligature, three days after which the external wound had closed." "On the sixth day, there being a bad odor from the wound, we passed a catheter into it, and threw in Dr. Peaslee's artificial serum, and continued the same for two weeks, as we thought with excellent effect."—Dr. Anderson.

Writing on the thirteenth day, Dr. Price says: "Her appetite is good, and she told me yesterday that she had not suffered as much

during, and since the operation, as she did in one night before." Writing on the thirtieth day, Dr. Anderson says: "She has now a good appetite, is gaining strength rapidly, wound completely healed, mind cheerful—in short, there is not an unpleasant symptom about her. I left her to-day sitting in an armed chair, in which luxury she has indulged for several days."

On the fifty-seventh day we were favored with a visit from her delighted husband, Mr. Jas. Neel, from whom we learned that she was enjoying excellent health, and was fully restored to her place at the head of her family.

We have stated that the abdominal parieties were greatly thickened, from serous infiltration. The escape of serum from the surface of our wound was so rapid and constant, and so evidently destined to be continuous, that after emptying the pelvic excavation several times, we were obliged to close the wound and let it accumulate in the abdomen. Furthermore, the attachment to the anterior and lateral portion of the abdominal walls being very strong, its separation was followed by a continuous oozing of blood and formation of coagula on the peritoneal surface; and although these were cleared away, time after time, there is no doubt but the surface of the parietal peritoneum was thus extensively covered subsequent to the operation. We mention these things as showing what the peritoneum is capable of tolerating in these operations.

The firm resistance which the hand met behind the mass, was evidently the root of the mesentery. At a later stage it was discovered that the transverse colon was adherent to the summit of the tumor. The hand had passed behind it, so as to reach that part. The colon was separated without difficulty.

Description of Tumor.—The solid mass rolled out weighed 25 pounds. The fluid portion collected, 27 pounds, a quantity of fluid escaping variously estimated at from 5 to 15 pounds; making the tumor about 60 pounds in weight. It is a fine specimen of the non-pediculated, proliferous cyst. A single cyst filled the pelvis, and contained four or five pounds. Two or three cysts occupying the epigastric region are large enough to contain two or three pounds each. With these exceptions, the superficial ones were only large enough to contain from three to five ounces, the deep seated ones being much smaller. The contents of the larger ones were somewhat limpid; those of the smaller ones were thick, and semi-gelatinous, and exceedingly various in color. The batch of cysts, thoroughly emptied, weighs nine pounds.

It will be remembered that we reported two cases of Ovariotomy in the last January number of the Journal—one successful, one fatal. We received a long letter recently from the happy subject of our first operation, from which we learn that she continues to enjoy very fair health. We forbear comment upon these cases at present, but shall recur to the subject hereafter.

Cases. By A. Metz, M. D., Massillon, Ohio.

I. *Trephining for Epilepsy.*—The following belongs to a class of cases that at present attracts a considerable degree of interest, since the labors of Marshall Hall, and Brown Sequard, have done so much to throw light on the obscure pathology of this dreadful disease. Unfortunately I have no notes of the case, and can, therefore, present only an imperfect sketch of it.

John Diehl, an intelligent, healthy child, when six years of age, received a blow from a corn hoe on his head, over the region of the left parietal bone, above and a little in front of the ear. Caries of the bone ensued, and the wound remained open for six months. Soon after the wound healed, he was taken with Epileptic fits, which at first returned at intervals of a month, but constantly increased in frequency and severity. I saw him six years after the injury, when he had one or more severe Epileptic fits every twenty-four hours. At intervals of from fifteen to twenty minutes, he had spasmodic contractions of the flexor muscles of the body, which would draw the head toward the knees. The spasms would continue nearly a minute. He was idiotic, and had lost the power of speech, to an extent, so as not to be understood by strangers. There was a marked depression of that portion of the skull that had received the blow.

On the 19th of May, 1851, I removed the depressed portion of parietal bone with the trephine. The relief was prompt and marked. The spasmodic contractions nearly ceased, his speech improved decidedly, and his countenance appeared to brighten up with returning intelligence. A month after the operation he had had but one quite mild fit. About two months after the operation, he was taken with a severe attack of malarious fever, which then raged in that locality, upon which, the fits, the muscular contractions, and all the bad

symptoms returned with renewed violence, which in spite of every exertion made to save him, gained in severity until he was relieved from his sufferings by death, four months after the operation. A cadaveric investigation could not be obtained.

II. *Fracture of both Clavicles.*—Last January, Mr. J. W. Cowen, a miner, while laying on his side at work, had several tons of coal fall on him, which fractured both clavicles. One was fractured near the acromion, and the other at its outer third. Never having given the management of such an unexpected contingency a thought, I was taken by surprise by the complete inapplicability of all the fixtures I had been in the habit of using for fractures of the clavicle. Fox's excellent apparatus I found useless—or at least quite inconvenient, for *want of a point of attachment for the tapes.*

The only one of my text-books that notices this trouble is Malgaigne, in his *Traite des Fractures.* Out of 2,358 cases of fracture of the clavicle at *l'Hotel-Dieu,* he saw but one case of double-fracture. The treatment of Dupuytren was to confine the patient on his back in bed, with pillows placed between the arms and the body. Malgaigne approves of this plan—and in addition recommends that a bandage be applied around the body to confine (*assujettir*) the arms and elbows. To say the best of this method, to confine the patient to bed for a month appeared uselessly severe, and I determined not to enforce it, providing I could adopt a milder plan of treatment.

I then applied to my friend, Doctor F. T. Hurxthal, for a pattern of his *yoke,* with which he has quite successfully treated fractures of the clavicle. I believe he is the originator of the yoke. I had the yoke project a few inches beyond the shoulders with holes in the ends for attaching tapes. I used the elbow-pokes and axillary pads of Fox, and the yoke presented excellent points of attachment for the tapes. The patient was able to be about during the treatment. The cure was completed with but little trouble and no deformity.

Notes on some of the Chemical Reactions of Strychnia. By T. G. Wormley, M.D.

In the following paper it is proposed to give the result of some experiments in regard to the relative value of the various tests which have been proposed for the detection of strychnia.

The various solutions were made with great care from pure strychnia, generally dissolved in just sufficient quantity of dilute acetic acid, and the reagents were generally applied by means of a glass rod dipped in a saturated solution of the reagent, to a *single drop* of the strychnia solution, delivered upon a glass slide, from a graduated burette which furnished a grain of fluid in each drop. Therefore, each drop contained an amount of pure strychnia, corresponding to the fractional dilution of the solution.

To prevent repetition in giving the various tests, the amount of strychnia operated upon will frequently be stated simply in the form of a fraction, it always being understood to imply the fractional part of a grain of strychnia, in one grain of water.

1. Ammonia.

1. $\frac{1}{100}$th grain of pure strychnia in one grain of water, gives with ammonia an immediate white precipitate, at first amorphous, but very soon it begins to assume a crystalline form, and in about three minutes the drop becomes a solid mass of lengthened prisms.

2. $\frac{1}{500}$ gives no immediate precipitate, but in a few seconds beautiful stellate crystals begin to form, which very soon become abundant.

3. $\frac{1}{1000}$ behaves much the same as 2—not so abundant.

4. $\frac{1}{2500}$, with the microscope, crystals begin to form in about a minute, in three minutes they are very obvious to the naked eye. If the drop be rubbed with the glass rod, rings of granules are very obvious to the naked eye in a few seconds, and the ppt. is much more abundant than when not thus treated.

5. $\frac{1}{5000}$, no indication after stirring for several minutes, except when viewed with the microscope, a few granules appear.

From the above, the limit of the test, when applied to a single drop, is when it holds in solution $\frac{1}{2500}$th its weight of strychnia.

2. Potash.

This reagent behaves much the same as ammonia, its limit being about the same. In applying this test it is very important that the proper quantity of the reagent be added, for if either too much or too little, no ppt. will be produced.

3. Carbonate of Potash.

1. $\frac{1}{100}$th grain of strychnia gives an immediate white precipitate of star-like crystals, which will redissolve if a sufficient quantity of the reagent has not been added.

2. $\frac{1}{500}$, in a few seconds small granules, prisms, and a few star-like crystals begin to form, which soon become rather abundant.

3. $\frac{1}{1000}$, in a few seconds, lengthened granules may be observed with the microscope, in a few minutes they are obvious to the naked eye.

4. $\frac{1}{2000}$, after a few minutes small granules are very perceptible.

5. $\frac{1}{3000}$, after several minutes, no indication with the microscope.

4. Carbonate of Ammonia.

In $\frac{1}{10}$ and $\frac{1}{500}$ solutions the same results as with carbonate of potash. In a $\frac{1}{1000}$th solution, no indication after 15 minutes.

5. Iodide of Potassium.

1. $\frac{1}{100}$th, solution in a few seconds gives a white crystalline ppt. of tufts of long prisms.

2. $\frac{1}{500}$, it is several minutes before crystals begin to form; if the solution be stirred, however, they begin to appear in about two minutes.

3. $\frac{1}{1000}$, by stirring, crystals begin to appear in about five minutes.

4. $\frac{1}{2000}$, crystals begin to appear in about seven minutes.

5. $\frac{1}{5000}$, with the microscope crystals can be seen in ten minutes, in about twenty minutes they are just perceptible to the naked eye.

6. Sulphocyanide of Potassium.

1. $\frac{1}{100}$, gives an immediate mass of white crystals.
2. $\frac{1}{500}$, in a few seconds the crystals are very abundant.
3. $\frac{1}{1000}$, by rubbing, in a few minutes crystals begin to form.
4. $\frac{1}{2000}$, after several minutes, a few crystals may be observed upon the border of the drop with the microscope.

7. Tannic Acid.

1. $\frac{1}{10000}$, gives an immediate white curdy precipitate.
2. $\frac{1}{20000}$, gives very satisfactory results.
3. $\frac{1}{30000}$, after a few minutes the ppt. is quite perceptible.
4. $\frac{1}{40000}$, after several minutes it is just possible to observe a white cloudiness.

The satisfactory limit of the test is when it is applied to a drop of fluid holding in solution $\frac{1}{25000}$th its weight of strychnia. The ppt. is very soluble in acetic acid; and if obtained from dilute solutions, it is, also, soluble in a drop of potash, giving a red liquid; but

when produced from strong solutions, the ppt. will not all dissolve in a drop of potash solution.

8. Bichloride of Platinum.

1. $\frac{1}{1000}$, an immediate yellow amorphous ppt., soon becoming granular.

2. $\frac{1}{3000}$, in a few moments an amorphous ppt, which soon becomes granular.

3. $\frac{1}{5000}$, in a few minutes the results are very good.

4. $\frac{1}{10000}$, if the solution be rubbed, small granules begin to appear in a few minutes, and soon the result is satisfactory.

9. Terchloride of Gold.

1. $\frac{1}{1000}$, gives a bright yellow amorphous ppt., which soon becomes partly granular; most of the granules float upon the surface of the drop. A portion of the ppt. collects into little yellow flakes.

2. $\frac{1}{10000}$, gives an almost immediate precipitate.

3. $\frac{1}{30000}$, gives very satisfactory results.

4. $\frac{1}{40000}$, at this degree of dulution the ppt. is still perceptible, but not satisfactory.

When the ppt. obtained from a solution containing $\frac{1}{5000}$ or less of its weight of strychnia is boiled, the ppt. will dissolve and give a yellow solution, from which it will again be deposited with little or no change upon becoming cool. If the solution contains more than $\frac{1}{5000}$ its weight, the ppt. will not entirely dissolve upon boiling; after cooling there will generally be a metallic gilding upon the sides of the tube. The ppt produced from $\frac{1}{5000}$, or more, dilute solutions will readily dissolve, without change of color, upon the addition of a drop or two of potash solution; if then the solution be boiled it will become a fine purple color, with sometimes a purple ppt. When the ppt. is from a stronger solution than above stated, it does not readily dissolve in potash, and when the mixture is boiled it yields a fine purple solution, with more or less of purple tint.

10. Chromate of Potash.—(Yellow.)

1. $\frac{1}{100}$, gives an immediate yellow mass of crystals, soluble in thirty drops of strong acetic acid.

2. $\frac{1}{1000}$, crystals begin to form in a few seconds, but they are not very abundant after standing 15 minutes.

3. $\frac{1}{20000}$, with the microscope a few prisms may be observed in eight minutes, but to the naked eye no indication after 20 minutes.

11. Bichromate of Potash.

1. $\frac{1}{100}$, an immediate mass of brilliant yellow dendroidal crystals.
2. $\frac{1}{1000}$, in a few seconds much the same as 1.
3. $\frac{1}{5000}$, crystals began to form in a few seconds, in a few minutes they are abundant.
4. $\frac{1}{10000}$, in a few minutes beautiful octahedree appear, resembling those of oxalate of lime.
5. $\frac{1}{15000}$, by rubbing, the crystals are obvious with the microscope in a few minutes, and in several they can readily be seen with the eye.

The precipitate produced by this reagent is not as readily soluble in acetic acid, as that produced by the yellow chromate of potash.

12. Carbazotic Acid.

This, and the three following tests, we have formerly recommended in our lectures. The only specific account we have seen of any of them, is in the recent edition of Taylor on Poisons, in which the iodine test is suggested.

An alcoholic solution of carbazotic acid will produce with—

1. $\frac{1}{100}$ grain of strychnia an immediate yellow amorphous ppt., soon becoming tufts of a twig-like form.
2. $\frac{1}{1000}$, almost immediately a ppt., soon becoming same as 1.
3. $\frac{1}{5000}$, by rubbing a few seconds, a copious deposit of granules.
4. $\frac{1}{10000}$, in about a minute much the same as 3.
5. $\frac{1}{20000}$, in a few minutes small granules are very obvious.

13. Chloride of Palladium.

1. $\frac{1}{100}$, an immediate dirty white ppt., soluble in acetic acid, insoluble by boiling.
2. $\frac{1}{1000}$, an immediate yellow precipitate.
3. $\frac{1}{5000}$, in a few seconds the ppt. is perceptible, and soon becomes pretty good.
4. $\frac{1}{10000}$, after rubbing for several minutes a few granules can be observed with the microscope.

14. Iodine.

Of the various tests recommended for strychnia, this is the most delicate. It was applied in the following experiments, by dissolving three grains of iodide of potassium in one fluid drachm of water, and then adding one grain of iodine.

1. $\frac{1}{1000}$, immediately a copious brownish yellow amorphous ppt., soluble in alcohol and ether, but only soluble in large excess of acetic acid. The ppt. partially dissolves in a few drops of potash solution, but is immediately replaced by a dirty white precipitate.

2. $\frac{1}{5000}$, a yellowish ppt., soluble in potash, and replaced by a dirty white precipitate.

3. $\frac{1}{50000}$, the precipitate dissolved in potash gives a faint white precipitate.

4. $\frac{1}{80000}$, the ppt. is immediately produced, and soon collects into little yellow flakes.

5. $\frac{1}{100000}$, if the drop be touched with a small drop of the reagent upon the end of a glass rod, it gives immediately a very obvious yellow precipitate.

If a few drops of the last named solution be placed in a watch crystal, and a drop of the test fluid be placed by its side, and allowed to flow into the solution, as they meet yellow streaks can readily be observed, and the solution will become turbid.

15. Bromine.

This reagent was prepared by saturating a strong solution of hydrobromic acid with bromine.

1. $\frac{1}{1000}$, gives an immediate bright yellow amorphous ppt.
2. $\frac{1}{10000}$, a greenish yellow precipitate.
3. $\frac{1}{50000}$, a dirty yellow ppt., which after a time nearly all dissolves.
4. $\frac{1}{80000}$, the ppt. is perceptible but soon dissolves.

16. Color Test.

It is well known that if strychnia, or its salts, be dissolved in sulphuric acid, and then a small quantity of bichromate of potash, ferridcyanide of potassium, peroxide of lead, or of peroxide of manganese, be added, a series of colors are developed. This is known by the name of the color test. We have succeeded best by placing the strychnia, or a drop of the solution evaporated to dryness, in a

watch glass, and by its side a drop of strong sulphuric acid, into which a fragment of bichromate of potash was introduced, and stirred until it imparted a yellow color; then by inclining the watch glass the colored sulphuric acid was allowed to flow over the strychnia.

1. $\frac{1}{1000}$ grain of strychnia in one drop of water, gave in a majority of a number of experiments very satisfactory results, however, in some the reactions were just perceptible. In solutions stronger than the above the results were always very satisfactory.

2. $\frac{1}{5000}$, in many cases we failed to get any indication, in others there was a faint trace of color, which very rapidly disappeared.— In no instance was there such a reaction as should be sufficient for medico-legal purposes.

3. $\frac{1}{1000}$ of a grain, dry, will always give a fine reaction; by allowing the acid to flow upon a portion of the deposit at a time, several indications may be obtained from the same deposit.

4. $\frac{1}{5000}$, dry, in a majority of instances the results were very good; in some, however they were very faint. The success of the experiment depends much on the character of the deposit left by evaporating the solution to dryness; sometimes the principal part of it is in the form of a ring, which, when examined with the microscope, consists of well-defined crystals; at others, the deposit is a confused mass distributed over the space occupied by the drop. In the latter case the result will not be nearly so satisfactory as in the former.

5. $\frac{1}{10000}$, in a number of cases manipulated differently, the majority gave no indication; some few a slight trace, but in no instance was the reaction satisfactory.

As the color test is relied upon, perhaps, more than any other for medico-legal purposes, it is important to remember that it is interfered with by the presence of morphia. When *one part of strychnia* is mixed with—

1. One part of morphia it gives very good results. The colors, however, are not so bright as with strychnia alone.

2. $1\frac{1}{2}$ of morphia. If a small quantity of this mixture is used the reaction is very good, but in a larger quantity, the reaction is just perceptible.

3. 2 of morphia. A small quantity of this mixture will give a pretty good reaction; $\frac{1}{30}$th grain gives but a mere trace.

4. 3 of morphia. A very small quantity of this mixture will

give but little indication, and a larger quantity gives no reaction indicative of the presence of strychnia.

17. Physiological Test.

We are indebted to Marshall Hall for this test. It consists in administering strychnia to frogs, by which they are rendered violently tetanic; he recommended the frogs to be placed in a solution of the poison. Dr. Harley proposes to inject the liquid into the thoracic or abdominal cavity of the frog.

In the following experiments a small portion of the strychnia solution—from $1\frac{1}{2}$ to 2 grains of fluid—was taken up by a pipette, the end of which was then introduced into the stomach of the animal, and the solution dislodged by blowing through the tube. The frogs were then placed under an open glass receiver. The species used was the *Rana Halecina.—Kalm* From experiments made upon more than one hundred individuals, we are led to believe that this species is more sensitive to the effects of strychnia than any of the other several species found in this locality; however the difference observed may have been due to some other cause than difference of species. The weight of the frogs used in the experiments detailed below, varied from 18 to 45 grains.

1. When a solution holding $\frac{1}{100}$th its weight of strychnia was used, the animals immediately became rigid, with violent tetanic spasms, and died, on an average, in 8 minutes.

2. When a $\frac{1}{1000}$ solution was used, the symptoms usually began in about three or four minutes.

3. $\frac{1}{10000}$ solution: the symptoms appeared in some in ten minutes, in others they were delayed as long as 24 minutes.

4. $\frac{1}{20000}$th solution; of 22 frogs used, in 17 of them the symptoms appeared in from 27 to 45 minutes; in the other five there were no unequivocal symptoms; there was, however, very great prostration, and some slight tetanic movements.

5. $\frac{1}{30000}$th solution; of 10 small individuals used, eight were seized in 45 minutes, the others did not show unequivocal tetanic spasms.

Columbus, Ohio, August 23d, 1859.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

On Amputation by a Long and Short Rectangular Flap. By THOMAS P. TEALE, Esq., F.L.S., F.R.C.S., Surgeon to the Leeds General Infirmary.

[The excellence of a stump is not to be judged of by its seemly form and its being not offensive to the sight; we ought to inquire whether it is well adapted to locomotion, by being able to bear a considerable portion of the weight of the body on its end. Now as a general rule, it may be stated, that stumps are not able to bear even the slightest pressure on their extremities where amputation has been performed by the circular or ordinary double-flap transfixion methods. Mr. Heather Bigg and Mr. Grossmith, of London, and Mr. Thomas Eagland, of Leeds, surgical mechanicians, who have had extensive experience in the adaptation of artificial limbs, state that pressure can never be borne upon the end of the stump formed by the circular or transfixion methods, on account of the pain produced; and that, as a general rule, the cicatrix is found adherent to the end of the bone.]

My own observation of such stumps, taken in conjunction with that of the gentlemen whose statements have been quoted, lead me to conclude: first, that in stumps formed after the circular and transfixion methods it is extremely rare to find a soft moveable mass of tissues over the end of the bone; secondly, that with very few exceptions the cicatrix is adherent to the end of the bone; and thirdly, that such stumps are generally unable to bear pressure on their extremity.

I have certainly known a few exceptions to these statements, and have also seen some apparent but not real exceptions in amputations for accident, in which, on account of the irregular destruction of soft parts, the flaps were formed irregularly, being freely taken from those parts where they could be obtained. But these cases must be distinguished from circular and transfixion amputations, performed "according to rule."

On these grounds, then, I think, it may fairly be asserted that stumps formed by the circular and transfixion amputations are far from being perfect.

To procure a more useful stump, and in the hope of somewhat diminishing the mortality of the operation, it is proposed to amputate by a long and a short rectangular flap—the long flap, folding over the end of the bone, being formed of parts generally devoid of large blood-vessels and nerves, whilst these important structures are contained in the short flap.

The size of the long flap is determined by the circumference of the limb at the place of amputation, its length and its breadth being each

equal to half the circumference. The only flap is therefore a perfect square, and is long enough to fall easily over the end of the bone. In selecting the structures for its formation, such parts must be taken as do not contain the larger blood-vessels and nerves. A flap so formed will be for the most part anterior in position as far as regards the general aspect of the body, but superior when the patient is in the recumbent posture, as during the after-treatment.

The short flap, containing the chief vessels and nerves, is in length one-fourth the other.

[Mr. Teale strongly recommends the surgeon on first practising this operation to mark out the lines of intended incision in ink, lest the long flap should be made too small.]

The flaps being formed, the bone sawn, and the arteries tied, the long flap is folded over the end of the bone; each of its free angles is then fixed by suture to the corresponding free angle of the short flap. One or two more sutures complete the transverse line of union of the flaps. At each side the short flap is united to the corresponding portion of the long one by a point of suture, and one suture more unites the reflected portion of the long flap to its unreflected portion. Thus the transverse line of union is bounded at each end by a short lateral line at right angles to it.

After the patient has been carried to bed, the stump is laid on a pillow, over which a large sheet of gutta percha tissue has been spread. *No dressing whatever* is required in the early part of the treatment. A light piece of linen or gauze is thrown loosely over the stump and pillow, and these are protected from the pressure of the bedclothes by a wire-work guard. To relieve tension the lateral sutures may be removed on the following day, but those of the transverse line may be allowed to remain until they are cast off, or appear no longer needed on account of the consolidated union of the parts. When the sutures of the transverse line have lost their hold, if the flaps should gape, a strap or two of adhesive plaster may be applied. Simplicity in the treatment is thus secured, as well as disturbance of the stump avoided.

To carry out these objects completely, the attendants and nurses must be strictly enjoined not to lift the stump from the pillow without the authority of the surgeon. As there are no dressings to be soiled, and therefore to require removal, the stump generally need not be raised from the pillow for many days, or even for two or three weeks. When there is a discharge of matter, the nurse must remove it frequently by a soft sponge from the subjacent gutta percha, without lifting the stump.

The chief advantages of this mode of operating are—

1st. The avoidance of tension.

2dly. The formation of a soft covering for the end of the bone consisting of parts free from large nerves.

3dly. The non-disturbance of the plastic process, and the consequent placing of the large veins of the limb, as well as the smaller veins of the bone, in a condition the least likely to take up purulent matter and putrid blood or serosity.

4thly. The favorable position of the incisions for allowing a free outlet for purulent and other discharges.

The avoidance of tension is secured by the ample size of the long flap. For although the tonic contraction of the divided muscles is allowed to go on unrestrained by circular bandaging or adhesive dressings, the flap is still amply sufficient to cover the end of the bone; indeed, at the time of the operation it often appears superabundant, but in the result it is not found to be so, chiefly in consequence of the great retraction of the short flap.

The non-disturbance of the plastic process is the chief point on which the future safety of the patient depends. The long flap folding over the end of the bone, and being free from tension, soon acquires an organic union with it. The open mouths of the veins of the bone are thus early sealed ; and the chief veins of the limb, protected in the retracted short flap, and undisturbed by unnecessary liftings and dressing of the stump, have also the best opportunity of becoming permanently closed, and of being thereby rendered incapable of taking up purulent and putrid matters.

There are, however, causes unfortunately beyond our control, which frequently oppose the plastic process. These are epidemic influence, hospital air, the peculiar condition of the general atmosphere, and, more serious than all, the effects of *shock*. The evils of shock are not only immediate, but also remote. A person in robust health may, by the immediate effect of shock from injury, have his life nearly extinguished, and may so far rally as to be submitted to amputation, but the *remote* effects of the shock are still in store for him. In such a case the vital condition of the blood and of the whole fabric of the body may remain so far lowered as to be incapable of setting up a *vigorous* process of repair.

The *character of the stumps* obtained by this method of operating may now be considered.

Their chief peculiarity consists in their having a soft mass of tissues, devoid of large nerves, moveable over the sawn end of the bone, which enables them to bear pressure on their extremity.

[This valuable pamphlet is illustrated by numerous wood engravings by Bagg, showing most of the amputations usually performed in Mr. Teale's way. The particular directions for performing each are also given. Our opinion may be slightly biased by the friendship and respect in which we hold the author ; but we cannot but look upon this little work as one of the most valuable contributions to surgery which has for many years issued from the press.—*Teale on Amputation by a Long and Short Rectangular Flap.* Churchill, 1858.

Practical Deductions from an Experimental Inquiry into the Influence of Food.

Dr. Edward Smith read an interesting paper on this subject before the Royal Medical and Chirurgical Society, May 10, 1859. In some preliminary remarks the author referred to the large amount

of vital action which is necessary to maintain life, and mentioned the various circumstances which he had noted during the continuance of a prolonged fast. He stated that the practice of administering arrowroot, or other fashionable foods consisting of starch, with water, under the impression that it was more nutritious and easier of assimilation than wheat flour, was indefensible, since it did not sustain the vital action to a degree capable of maintaining life, and that nature has not provided starch as food altogether apart from nitrogenous substances. He contrasted the action (or rather want of action) of starch with that of the cereals, and showed that the latter is nearly as great as that of any substances with which we are acquainted. He drew the distinction between an action which increases the existing amount of vital power, and that which only tends to prevent loss of vital power—two circumstances which in practice are commonly confounded; and showed that beef-tea, wines, and brandy can act only in the latter mode, while the cereals act in the first-named manner. Hence, in cases of prolonged exhaustion, where there has long been more waste than supply, the former is not sufficient, and it is essential that the latter be added or substituted.

The action of milk is exceedingly analogous to that of the cereals both in extent and duration, and the combination of the two appears to be the most perfect kind of food. The casein is to the milk what gluten is to bread, and the oil in the milk with substances (respiratory excitants) which call it into action, in a manner quite analogous to the common combination of bread and butter, or of a mixture of fat and lean flesh. The author showed that milk and flesh were the best and most natural modes of administering fat, and altogether preferable to the administration of separated oils. He referred to the frequent use of skimmed milk in Germany as a medicinal agent, and of sour milk in Greece and America as a part of food; and explained the action of the former by its casein and sugar as respiratory excitants; and that of the latter by the advantage of administering lactic and other acids in that combination in the summer season and at other times, when the blood, by tending to undue alkalinity, is less capable of carrying on the oxidizing process. He showed that in fevers skimmed milk is preferable to new milk.

As fats lessen the respiratory changes, they ought to be, and are, combined with other articles of food which increase them. The author referred to the importance of determining the seasons for the administration of both fat and starch, and showed that there is less difference in the relative amount of these two substances, used in different climates, than has been commonly believed. He attached importance to the physical properties of fat, and explained the beneficial action of that substance when applied to the skin. He thought this latter mode of employing fat to be especially fitted for cases of debility, with lessened appetite and perspiring, soft skin, in which state the waste is always greater than the supply. The beneficial action of sugar was insisted upon; and the love of the French for sugar and water was explained by the refreshing coolness, the innoc-

uousness, and the agreeable flavor of the fresh-made beverage, and the great freedom and lightness of the respiration which attend its action. He thought the ill effects of sugar in the healthy system had been exaggerated. The action of animal substances in increasing the respiratory process, in addition to the supply of plastic material, was dwelt upon, and shown to be of great value to the system. These are allied to gluten, and some of them probably act as ferments; and, in illustration, he especially cited cheese, which promotes assimilation if taken in small quantity, but is apt to disturb it if much is eaten. Tea was shown to cause increased waste, and to excite every function of the body, and hence was well fitted to cases where there was a superfluity of material in the system, or where we otherwise desire to induce a temporary increase in the vital action; but is injurious to those who are under fed, or in any case where there is greater waste than supply. In illustration, the author cited the increase in the loss of weight in the prisoners at Wakefield when tea was added to their food. The action of tea has been hitherto misunderstood, but the sagacious observation of Liebig as to its analogy with the active principle of the bile was much commended. He (Dr. Smith) recommended its use instead of spirituous liquors by soldiers on march, or otherwise exposed for a lengthened period to great heat; since by its powerful influence in increasing respiration and the action of the skin, without increasing pulsation, it was particularly fitted to counteract the influence of heat in its tendency to induce heat-apoplexy, or, as more suitably termed by Mr. Longmore, "heat-asphyxia;" twenty-five grains of tea in a concentrated cold infusion, taken every hour or half hour during exposure would suffice. For similar reasons, he urgently recommended it as an adjunct in the treatment of suspended animation, as from immersion. It has a rapid and accumulative action, so that the small and repeated doses have much greater effect than larger and more isolated ones. It differs from coffee chiefly by increasing the action of the skin, and thereby tending to cool the body, and therefore the two substances are applicable to different conditions of system. He thought that both, and particularly tea, ought to be more commonly used as medicinal agents. Coffee-leaves he believed to be a valuable febrifuge medicine, and one particularly fitted for cases of nervous excitability.

The author then contrasted the effects of brandy and gin with tea, and showed that in all respects they were directly opposed; but coffee so far resembled them in action, that it lessened the action of the skin, and thereby lessened refrigeration. Rum and beer he regarded as restoratives, and the combination of rum and milk as the best restorative employed as food; while brandy and gin simply lessen waste. He regarded all alcohols as having their chief influence in sustaining the action of the heart, and recommended that they should be given in small quantities, and repeated every quarter of an hour or half hour in urgent cases, so as to accumulate their action, rather than allow reaction to follow each dose by permitting a long interval between the doses. He mentioned a case in which he

gave six bottles of port wine in forty-eight hours, with the effect of sustaining the patient's life, and reducing the pulse from 150 to 90 per minute. He believed that alcohol increased the respiratory action indirectly through the nervous system, and that in fine old wines and spirits this action is lessened by the volatile elements, which have a conservative tendency. He particularly cited the conservative influence of fine old port wine, and the disturbing influence of new and inferior spirits. The primary and secondary action of all alcohols, when taken in an amount to affect the sensorium, was always felt, and the author described the attendant circumstances.

In conclusion, Dr. Smith stated that dislikes for foods are indicative of lessened action, and that other foods of analogous properties should be provided in such cases; and also that it was probable that at least some kinds of azotized substances are more fitted for the hot season, when the chemical changes are greatly reduced, than has been heretofore believed.—*Med. Times and Gazette*, May 21, 1859.

On the Treatment of Prolapsus Ani in Children. By M. Guersant. (Behrend and Hildebrand's Journal fur Kinderkrankheiten, 1859, 1, 2.)

In a small hospital in London, to which patients suffering from diseases of the rectum alone are admitted, prolapse of the anus is not treated by operation. According to Dr. Salmon, this disease can be cured, not only in children, but also in adults, by the evacuation of the bowels in the recumbent posture, as in this position the patient cannot strain much, thus generally, preventing the descent of the intestine. After the observance of this treatment for some time, the relaxation of the parts, which permitted the prolapse, disappears, and a cure is effected. At the same time vegetable astringent injections are employed, although alum will be found useful. As a local application strychnia may also be mentioned. This was first employed successfully by Duchassoy, who made two or three very small blisters around the margin of the anus, and dressed the raw surfaces with the ointment of strychnia. Dr. Johnson treated, in 1854, two cases by the local application of the same remedy; he states that in the lighter and more recent forms of prolapse he obtained a cure by regulating the bowels, employing astringent injections, and administering tonics. In neglected cases, when the sphincter is much relaxed, strychnia may be of some use, but it is not, however, to be recommended, as it is unreliable in grave, and superfluous in light cases; it is, moreover, troublesome, and not without danger. Dr. Johnson considers cauterization after Guersant's method more valuable.

In the Metropolitan Free Hospital, Mr. Hutchinson employs the tincture of nux vomica, in very small doses, since he believes it imparts tone to the sphincters and walls of the intestines.

Sir Benjamin Brodie prescribes, internally, calomel and rhubarb, and uses injections of the dilute tincture of the chloride of iron.

Mr. Ashton maintains that in children suffering from this affection, the liver is principally to be attended to; and Mr. Curling recommends the use of cod liver oil, after sufficient purgation.

Mr. Salmon treats recent cases in children in the following way: First, the patient must evacuate his bowels in no other but the recumbent posture; second, the prolapsed part is thoroughly moistened with a decoction of oak-bark and alum; third, internally, he employs calomel and rhubarb; when he orders, fourthly, tonics, and a nourishing diet.

When the usual remedies have been employed without effect, and the symptoms remain obstinate, M. Guersant advises cauterization of the skin and sphincter muscles with the hot iron. He does not cauterize the whole of the protruded mucous membrane, as was formerly done, as he considers the measure barbarous and hazardous. He proceeds, generally, in the following manner: The child is subjected to a certain diet, and shortly before the operation an injection is administered to clean out the lower bowel. The patient is placed upon his side, his thighs are flexed, and the protruded rectum reduced; an assistant drawing away one buttock, while the operator controls the other. The cautery is about the shape of that used by dentists, either curved or straight, and terminates in a small ball, which, above, runs out into a little point. It is applied at opposite points around the anus, and must penetrate the sphincter in order to be efficient. It is also necessary to draw the margins of the anus well apart on applying the cautery, and allow the small ball, after its point has penetrated the sphincter, to act upon the margins of the skin and mucous membrane. The patient must be placed under the influence of chloroform, and the iron be used at a white heat. If the rectum protrude during the operation, it should be pushed out of the way of the instrument. Cold-water dressings are the only applications made after the operation.

M. Guersant recommends this plan of treatment as an excellent, but not infallible means. In a few rare cases the children are cured in one day; more freqently, however, the prolapse returns in a few days, and the cure is not completed before the eighth or tenth day, when cicatrization has taken place. Sometimes a second cauterization will become necessary.

Observations on the Diagnosis of Diseases of the Pancreas. By Prof. Oppolzer, of Vienna.

The most important diseases of the pancreas, evinced by the anatomical changes, are scirrhus, atrophy, hypertrophy, acute and chronic inflammation. *Scirrhus of the pancreas* is much rarer than *scirrhus around the pancreas* (scirrhus circa pancreatem;) its diagnosis is there-

fore not easily established, and this difficulty is increased by the circumstance that the evacuation of fæces containing fat is not peculiar to diseases of the pancreas, as was formerly believed, but may also occur in affections of the mucous membrane of the duodenum, and that the digestion of amylaceous matter may be hindered without disease of the pancreas being the cause of it.

Atrophy of the pancreas has recently attracted much attention by its occurrence in diabetic patients, and by Bouchardat ascribing to these two diseases the relation of cause and effect. It is proved that atrophy of the pancreas may be also produced by impediments in the secretory duct, or at its mouth, such as obstruction of the duct of Wirsung by foreign bodies, further by biliary calculi, cancer, and the cicatrix of a perforating ulcer near the diverticulem Vateri. It is, however, impossible to diagnosticate atrophy of the pancreas from the symptoms which accompany the disease, such as pain in the region of the pancreas, fatty stools, and emaciation.

Enlargement of the pancreas may take place in consequence of the deposit of fatty matter, whereby the acini become compressed, and the whole organ is converted into a mass of fat. In this affection also no characteristic symptoms are known, not considering that it is quite impossible to diagnosticate a lipoma within the peritoneum.

The occurrence of *acute inflammation* of the pancreas has been wholly denied. Oppolzer himself, however, saw the organ in one case swelled, reddened, and with exudation between the acini, as in parotitis. The patient suffered from oppressive pain in the pit of the stomach, and tried to obtain relief from it by taking brandy and pepper. This was followed by vomiting and increase of the pain. The vomited matter consisted of mucous and bile. The patient had a violent fever, very frequent pulse, and cold extremities, his face was shrunken, and he suffered from obstinate constipation. There was no blood vomited; and the case was diagnosticated as one of perforating ulcer of the posterior wall of the stomach. On the third day after being admitted into the hospital, the patient died, and the post-mortem examination proved the stomach to be healthy; around the pancreas, however, and between the layers of the mesentery, a large effusion of blood was found; the pancreas itself was enlarged to double its size, of a dark red color, and contained an exudation colored with blood between the acini.

Chronic inflammation of the pancreas was formerly diagnosticated very frequently; but it was usually confounded with perforating ulcers of the stomach. Chronic inflammation of the pancreas may, however, coexist with gastric ulcer, or with ulcer of the duodenum, and is then a secondary affection, the ulcer of the stomach or of the duodenum having formed adhesions with the pancreas. Prof. Oppolzer has observed a case of this kind; the patient, a girl, had suffered from a perforating ulcer of the duodenum, and on post-mortem examination adhesions between the ulcer and pancreas were found.

For some time it was considered dangerous to suppress salivation produced by a mercurial treatment, as it was thought that such a measure would give rise to an undue secretion of the pancreatic fluid

and to diarrhœa. Nothing, however, is known concerning the sympathy between the salivary glands of the mouth and the pancreas, as to whether diseases of the pancreas usually cause diarrhœa.

In regard, finally, to determining the position of the pancreas by percussion, it would not be impossible to feel it in the abdominal cavity, if the abdominal parietes were relaxed, and under normal conditions; but for estimating the size of the pancreas, and for drawing conclusions in regard to its diseases, there is exceedingly little to be gained by percussion.—*Allg. Wiener Medizinische Zeitung*, and *Medizinische Neuigkeiten*, April, 1859.

Memoir on the Oxalate of Lime in the Sediments of the Urine, and on the Gravel and Calculi of Oxalate of Lime. By M. Gallois. Read before the *Academie des Sciences* of Paris, April 4th, 1859.

The following propositions contain the substance of M. Gallois' memoir:—

1. Oxalate of lime is a substance which may be found transiently in the urine of the healthy individual, at all ages and at all periods of life.

2. It makes its appearance in more or less considerable proportions, especially under the influence of certain aliments, and probably of certain medicines.

3. Oxalate of lime is frequently met with in the urine of the sick, but its excretion does not constitute a disease by itself. Oxaluria is thus not a morbid entity, but only a symptom common to very different affections. Nevertheless, it is proper to state that oxaluria is observed oftener in spermatorrhœa, and in certain diseases of the nervous system, especially in dyspepsia.

4. There is a body which very frequently accompanies oxalate of lime in the urinary sediments, as well in gravel as in calculi; this body is crystalized uric acid.

5. The very common coexistence, in the urine and urinary concretions, of uric acid and oxalate of lime, seems to me to explain the formation of the oxalate of lime within the organism.

6. The relation which pathologists have endeavored to establish between oxaluria and diabetes, is not admissible.

7. Oxalic acid (and consequently oxalate of lime) seems to be derived from uric acid, and ought to be considered as an advanced degree of oxidation of the latter body, or of the elements which serve to constitute it; thus whenever there is uric acid in the economy, or the elements which are necessary to form it, oxalic acid can be produced under the influence of a more advanced oxidation which takes place in the blood.

8. Oxaluria demands, ordinarily, no other treatment than that of the physiological or morbid condition with which it is associated.

A great variety of remedies have been advised in the treatment of oxaluria:—First, abstinence from aliments and medicines containing oxalic acid; second, the use of small doses of nitromuriatic acid in a bitter and tonic infusion, of nitrate of silver (in gravel,) of colchicum (in certain cases,) or of phosphate of lime, etc.

9. For my own part, I have found that the alkaline mineral waters constitute the most efficacious means to prevent the excretion of the oxalate of lime, particularly if it is accompanied by a deposit of uric acid, a condition which seems to me the most frequent of all.—*Archives Générales*, May 1859.

Coup de Soleil.

Dr. Wm. Pirrie, late assistant surgeon to the 71st Highland light infantry, has related (*Lancet*, May 21 and 28, 1859) the results of his observations of numerous cases of sunstroke, which occurred during Sir Hugh Rose's summer campaign of 1858, in Central India.

The mode of death in all but the rapid form, is evidently, he says, by apnœa, "or at all events the symptoms of apnœa plainly predominate; and hence the name 'heat-asphyxia,' given by some to this most alarming disease. The symptoms are distinctly those of that mode of dying in which death commences in the lungs; but by what means the circulation begins to be arrested in the lungs—or, in other words, the manner in which high temperature operates in causing stagnation of blood in the lungs—whether it be by giving rise to immense engorgement, or by causing imperfect arterialization of the blood—I do not consider myself qualified to give an opinion. * *

"It is quite possible," he further remarks, "that even in the forms of sunstroke in which the respiratory apparatus is primarily affected, there may be some degree of cerebral syncope, even from the commencement; but, although it may be an erroneous impression, the study of such cases produced in my mind the belief, held by many, that death is caused by apnœa, or that the symptoms of that form of death predominate.

"In the forms of sunstroke in which the patient, without any premonitory symptom, falls down insensible, makes a few gasping efforts to breathe, and in a few minutes expires, the symptoms appear very clearly to indicate death beginning in the brain. The sensibility is first destroyed, and, as a necessary consequence, the functions of the lungs are suspended, and circulation of venous blood takes place: circulation of venus blood in this form of dying being the *consequence* of the loss of sensibility; whereas in death by apnœa it is the *cause.* The essential anatomical characters of both modes of death being the same, presenting only differences of degree in the chest and in the head, it is chiefly by the symptoms during life that an opinion can be formed as to whether death was caused by coma or by asphyxia. I am quite aware how speedily sensibility is de-

stroyed in death by apnœa; but many cases of sunstroke produce a strong conviction in the mind of the medical observer, that sensibility ceases first, and that death begins in the brain."

With regard to the treatment, Dr. Pirrie says his testimony may be given in a few words. "In many cases of almost instant death by sunstroke, life was lost before it was possible to institute any mode of treatment; and, in many others, the powers of life were so thoroughly sunk, from the moment of seizure, that remedies produced no impression on the symptoms. In no case was general bloodletting at all beneficial, but decidedly the reverse. In many instances, I have seen it employed by men of great experience who were well qualified to judge when it was likely to be useful, and the result was always unfavorable; and I have been told by many who had ample means of observation during the summer campaign of 1858, that venesection always seemed to hasten a fatal termination. The result of bloodletting seemed of itself sufficient to show that the vital organs are overpowered by some influence in addition to that of local congestion.

"The treatment most generally useful consisted in removing the patient to the shade as speedily as possible—in preserving the body in a proper position—in the energetic employment of cold effusion to the head—in producing as cool an atmosphere as possible around the patient—in the diligent use of friction and heat to the extremities and other parts, so as to cause derivation from the head and chest—in acting sharply on the liver and bowels by mercurial and other purgatives—in frequently administering diffusible stimuli, and in causing determination to the surface of the chest by applications of mustard or of turpentine. Along with these remedies, local depletion from the head seemed sometimes to be beneficial. When the patient became comatose, blisters to the back of the neck, and stimulating cataplasms to the feet or legs, were tried; but, in too many instances, they were of no avail.

"Another measure, to which Dr. Simpson, of her Majesty's 71st regiment, attached importance, was to engage the patient's attention by keeping him answering questions put to him in a loud tone of voice; to rouse him up by continually talking to him, and by rubbing his limbs; and not to leave him to himself till the remedies should have fair time for their operation. This expedient seemed, in some cases, to assist in warding off the insensibility, if not in some cases to prevent its accession.

"Under the use of the above-mentioned treatment, modified according to circumstances, many patients recovered; but, in too many instances, the result was fatal to those who were attacked with this singular disease."

Coup de Soleil.—It appears, from the report of Thos. Longmore, Esq., Surgeon to the 19th Regiment, that no less than 16 cases of heat-apoplexy occurred in that regiment, while stationed at Barrackpore, between May 23d and June 14, 1858.

Mr. Longmore specially calls attention to a symptom, important from its constancy and early manifestation—we mean irritability of

the bladder. In the case of Lieut. Colonel S——, "the *first* thing of which he complained was irritability of the bladder. If this symptom should prove to be a general precursor of the attack, it might be rendered valuable as an indication of the approaching danger, which, by early and proper care, might then probably be averted; and its presence at a time when heat-apoplexy was prevalent would make the surgeon alert to obviate the more serious symptoms which might be expected to follow." The doctrine here implied is that of the *local* warning (symptoms) of disease in operation at, perchance, a remote distance in the body, and which, being itself far removed from the scene of its local manifestation, would not *appear* to be the cause of such topical disturbance. This doctrine, in its important relation to diagnosis, is fully enunciated in a work just published. At page 11 of that work, Mr. Gant observes: "Irritability of the bladder, for instance, arising from some morbid condition of the urine, may prove to be the local warning to an individual, which first directs his attention to that condition, itself due to a far more grave disease of the kidneys, the stomach, or the nervous system. Hence the value of many symptoms, which, although themselves comparatively insignificant, may, nevertheless, guide us to discover latent disease in some distant and hitherto unsuspected organ."

Appearances on examination after death.—"In all the cases," Mr. L. says, "much the same appearances were presented as if the patients had died asphyxiated from some cause. Thus, excessive engorgement of the lungs, amounting generally to complete obstruction of the pulmonary circulation, and, in parts, having all the appearance of true interstitial apoplexy, was most remarkable. The cerebral congestion, less marked in character, and less constant in amount, seemed to me *secondary* to the failure of the due performance of the act of respiration, and, perhaps, resulted from loss of tone in the vessels, and from enfeebled action of the heart, consequent upon the imperfectly oxygenized blood it was receiving." In conformity with these post-mortem observations of heat-apoplexy, Mr. Longmore would term this disease "heat-asphyxia;" and the treatment which proved most successful would seem to corroborate this view of its pathology.

"*Treatment.*—"Cold effusion by mussucks of water, poured over the head, chest, and along the spine; counter-irritation by means of mustard poultices to the chest, purgative enemata, and afterwards, when the head remained oppressed, blistering to the nape of the neck." Venesection was not found useful, but topical blood-letting seemed advantageous when there was much fullness of the superficial veins about the head and neck. The duration of the disease presented two extremes. "Of the 7 fatal cases, 1 died in one hour, and 1 in forty-six hours, after the attack."—*Lancet*, March 26, 1859.

A Contribution to the Statistics of Cancer, collected from the Records of the Middlesex Hospital.

Septimus W. Sibley, Lecturer on Pathological Anatomy at the Middlesex Hospital, read an interesting paper before the Royal Medical and Chirurgical Society (March 8, 1859), in which he presented the result of an examination of 519 cases of cancer, together with the records of 172 post-mortem examinations. The more recent cases had been reported with uniformity and with some degree of fullness; some of the older cases were less perfect. In the first place the diseases embraced within the limits of the paper are defined, and what had been excluded from consideration. A table is then given, in which the seat of the primary cancer in each of the 519 cases is exhibited. There were 103 instances in the male, and 416 in the female; amongst the latter there were 191 of breast, and 156 of uterine cancer.

The ages of the patients are next stated. There were three examples under the age of ten (all males), and one between the age of ten and twenty. Tables are given, in which the ages are arranged in decennial periods, the cases of breast and of uterine cancer being placed in separate groups. The average age of those attacked with uterine cancer was 43.28 years; with breast cancer, 48.6.

Effect of marriage, pregnancy, &c.: Of the female cancer patients, 83 per cent. either were or had been married, and amongst the single women the disease occurred oftener in the breast than in the uterus. Of the married women, 86 per cent. of the uterine, and 47 per cent. of the patients with breast cancer, had borne children. The average number of the births was 5.2 among the former, and 3.89 among the latter. The interval between the last pregnancy, and the proportion attacked before and after the cessation of the catamenia, are also given.

The duration of life (from the first discovery of the disease), in patients who had not been operated on, varies greatly in the different classes of cases. In the breast it is 32¼ months; in the uterus, 14; in the stomach, 8½; in the rectum, 34; in the lip, face, &c., 53; in the penis, 34½; in the bones, 10; in the labium, 29. These figures are not perfectly comparable, as in some cases, especially the external cancers, the period given is the entire duration of the disease, whilst in others (as in the stomach) the period is only that during which the symptoms were present.

An account is then given of the operations (by the knife) in cases of cancer of the breast. Three patients out of 60 died from the effects of the operation. The average duration of life of those who were operated on was 53.2 months. In comparing this with the duration of life in cases in which the disease was allowed to run its natural course (32.25 months), it should be remembered that the cases submitted to operation are more or less selected ones.

As to the hereditary nature of the affection, the difficulties in obtaining accurate information upon this point are first alluded to. The chief of these is the very imperfect knowledge which most peo-

ple, but more especially hospital patients, possess of the diseases to which their relatives have been subject. Out of 305 cases, in which the point had been particularly inquired into, 34 patients remembered to have had a relation affected with cancer. A table is given of the seat of the disease in each of the 34 cases, in 17 of which the breast was the part affected. Tables are also given, in which the degree of relationship of the cancerous relative is shown, and also the proportion affected on the father's and on the mother's side. Out of the 34 cases, in six more than one relative was cancerous, and in one instance (the chief features of which are mentioned) no less than five relations suffered from cancer.

The existence of phthisis in different members of a cancerous family is also adverted to. This disease existed in 50 families out of 130. Similar tables to those before mentioned are given, in which the degree of kinship is exhibited; it being also noted whether the disease was on the father's or the mother's side.

The notes of the 172 post-mortem examinations are next analyzed. In the first place, a table is given, in which the seat of the primary cancer in each instance is exhibited. The cases are then arranged in the following groups: 1. Cancer of the breast. 2. Cancer of the uterus. 3. True cancer of other organs. 4. Epithelial cancer. A series of tables follows, in which the secondary cancers are enumerated, and the cases arranged as follows: *a.* The disease strictly local. *b.* Involving also the lymphatics of the part. *c.* Involving the lungs and other parts, the liver being unaffected. *d.* The liver cancerous, the lungs being free from this disease. *e.* Those cases in which there were tumours in distant parts of the body, but both the lungs and liver were free from the disease. Moreover, in each form of the affection, a list of the non-cancerous diseases found in the bodies of the cancer patients is appended.

The bearing of the foregoing facts on the mode in which cancer is disseminated throughout the body is next alluded to, three distinct modes of multiplication being recognized: 1st, the growth of tumors in the immediate neighborhood of the cancer; 2d, the development of cancer in the lymphatics of the parts; 3d, the formation of cancerous tumours in distant parts of the body.

In regard to the cachexia, it was noticed that this condition only became developed as the ulceration and sloughing extended, and could not be attributed to pre-existing changes in the condition of the blood of the patient. In nearly all instances, the patient died from the ordinary effects of ulceration, or from the interference with vital functions.

Remarks on the Epidemic of Diphtherite (or Hog-skin Angina.) By O. D. Palmer, M. D., *Zelienople, Pa.*

[Translated from the *Gazette Hebdomadaire de Medecine et de Chirurgie* of July 15th, 1859, for the Boston Medical and Surgical Journal.]

Notwithstanding the positive opinions of some authors to the contrary, diphtherite is an affection still but little known. Whilst maintaining this position, it seems to me proper that those who have been called upon to observe it, should make known, not only what they have been able to see particular in the new epidemic, but also the comparative appreciation of the general facts, as they have been observed by themselves, or as they have been learned from others.

In the commencement of this epidemic, with my memory surcharged with the writings most recent and esteemed, and more especially with the original works of M. Bretonneau, I considered myself armed against it; all seeming to me simple and clear. The mode of propagation, contagion, progressive extension; the disease extending from the throat or nasal fossæ into the rest of the organism, at first wholly local, drawn to the exterior, and only affecting the whole system from the external to the internal parts; the therapeutic success, dependent on the energetic application of the wholly surgical means, that is, dependent on the hands of the physician—all was simple, and my only expectation was to have to follow the best models.

My hopes have been betrayed; the perfect image that I awaited, has discovered itself in a very different shape, as will appear from the picture that I am about to trace.

I have seen an affection raging among different populations, attacking at the same time individuals having no communication with each other, without regard to other diseases, with but few rare exceptions originating from an unknown influence, and seeming to choose its subjects indiscriminately. The disease begins like a severe eruptive fever, in the midst of a large retinue of general symptoms, with considerable tumefaction of the ganglions, even when the false membrane is hardly developed; commencing in the throat, to extend from one part to the nassal fossæ, and from another to the respiratory passages, and sometimes to the digestive apparatus; showing itself also in the auditory conduit, at the vulva, in the vagina, in cutaneous lesions; attacking various points of the organism, without relation to contiguity—the throat with the vulva, the throat with the bronchia, the larynx remaining sound; the throat, then the intestines. These coincidences, indicated by the symptoms, have not been justified by the opening of bodies; but in two cases of tracheotomy, I have been able to demonstrate the absence of false membrane in the trachea, whilst it existed in the bronchia, or was in the state of being formed. In a good number of instances the adventitious membrane has been detached without treatment, or with very little, and as quickly as when cauterization daily or even more frequently have been practiced. This is no hindrance to the re-formation of false membrane, in parts contiguous or remote, and these new attacks have taken place, both when the throat contained the

pseudo-membrane adhering, and when *this was completely free.* That is to say, we have observed an affection, originating more from epidemic influence than from contagion, marching, in the manner of the exanthematous fevers, from the circumference to the center, not always following the way of contiguity, in extending its characteristic products, little susceptible of being arrested in its progress by caustics, but sometimes yielding to the efforts of spontaneous reaction—an indication that we should endeavor to imitate, in furnishing the organism means of sustaining a frequently unequal contest.

All is linked together in the doctrine of M. Bretonneau. Generalizing the facts of incontestable contagion, he admits that in all circumstances the diphtheritic germ is deposited locally, as it is in syphilis. He forgets that in whatsoever part of the skin or mucous membrane the virus comes in contact, it is the throat, amygdalæ, and nasal fossæ, that produce, with some rare exceptions, the first vestiges of false membrane, belonging to this species of *angina.* It is different in this particular from syphilis, to which it assimilates, and which acts at first, and always on the part where it is applied. There is, then, in all cases, and especially in serious cases of diphtherite, a diseased action internally succeeding to the contagion (when it is caused by this), and subsequently producing a similar disease, as takes place in the eruptive diseases, variola, rubeola and scarlatina, which likewise appear insidiously, and without our being obliged to refer their origin to contagion. May it not be the same in this pseudo-membranous angina? I have offered sufficiently numerous examples before, and have remarked elsewhere, "its contagion is *possible;* it is not at all *necessary.*"

From the full conviction of the development of this disease *internally,* to that of its destruction, at once, by cauterization, is but a step; this step has been taken, and numerous successes are furnished in support of the doctrine. They have been shown, doubtless, in severe cases, but much more often when the cure has either been wholly spontaneous, or obtained by the mildest means. These successes have not been wanting to me, either, though I have confined my cauterizations to the *isthmus of the throat.*

It is, then, by figures, that it will be necessary to resolve this important question, and its solution is required by science. Whilst awaiting, may we not be permitted to adduce the greater success in tracheotomy, since surgeons no longer *cauterize* the trachea after the operation, against the utility of such a practice in the larynx.

With my own experience, and after an attentive perusal of the known facts, I think we are not far from the truth in considering this primarily a general disease, inclined to manifest itself upon the mucuous membrane in the same way that the eruptive fevers do upon the skin. Doubtless this view is less seductive, in a therapeutic point of view, than the preceding one; for were it established, we should be left unarmed against this, as we are against the eruptive fevers, all the phases of which we are obliged to submit to, without the beneficial interference of heroic means. But if this is the truth, we must accept it as it is.

Pathological anatomy, chemistry, the microscope, have not as yet afforded very great aid to the study of diphtherite. The first of these, in explaining the internal lesions caused by this disease, has only confirmed, in regard to the interior, what clinical observation had established, in the living, in the parts accessible to view. It has shown, also, the liquid state of the blood, the vascular congestions resulting from this state, and the mechanical asphyxia caused by the false membranes obstructing the air passages. It has examined, perhaps too negligently, the lymphatic system, which appears to play the most important part in this disease.

Chemical analysis and the lens, in ascertaining the fibrinous nature of the false membrane, have still not been able to distinguish it from the *pultaceous covering* that accompanies a pathological state very different from the pseudo-membranous angina.

The chemists and micrographers ought to give us correct examinations of the blood at different stages of the diphtherite. This would probably open the way to a knowledge of the morbid state that certainly precedes a primitive modification of this fluid, before it is essentially altered by the enormous amount of fibrine thrown upon the mucous membrane—a consecutive alteration, that explains so well the hæmorrhages and congestions, the debility so great and so slow to disappear, and those paralyses which hamper convalescence.

Abstract of a Lecture on the Classification and Geographical Distribution of the Mammalia. Delivered in the Senate House of the University of Cambridge, May 10th, 1859. By RICHARD OWEN, D.C.L., &c., &c.

The learned Professor expressed his sense of the honor which had been done to him by the appointment to the Sir Robert Reade's Lectureship,* and the pleasure it would afford him to give to the members of the University a brief account of some of the prominent features of one of the divisions of the animal kingdom. He had selected the subject of the Classification and Geographical Distribution of the Mammalia, because it afforded an opportunity of taking a general survey of one of the most interesting domains of nature in the short period allotted to a single lecture.

* The endowment for this lectureship was given to the University in 1524, by Sir Robert Reade, Lord Chief Justice of the Common Pleas in the reign of King Henry VIII. A statute approved by Her Majesty, by order in Council, April 6th, 1858, directs that the lecturer shall deliver one lecture in term time in every year. The lecturer is to be appointed by the Vice-Chancellor during the Lent Term in every year, and to deliver his lecture in the Senate House, on a day to be fixed by the Vice-Chancellor. The present Vice Chancellor, accordingly, appointed Professor Owen, being desirous that the office should be held for the first time under the new statute by one who would shed a lustre upon it, and who at the same time, is not a member of the University.

He detailed briefly the principles and peculiarities of the classifications which had been respectively formed by Aristotle, Ray, Linnæus, and Cuvier. The first of those naturalists had evinced a very extensive and correct knowledge of the mammalian group, by including the cetaceans in it, and by the manner in which he had divided it into the three great classes of BIPODA, TETRAPODA, and APODA. From the time of the publication of his remarkable treatise, a period of more than two thousand years elapsed without any advance in the subject; and nothing indicated more forcibly the decadence or dormant condition of the human intellect, during a great part of that period, than the dearth of new facts and generalizations in natural history. To Ray, a member of the University of Cambridge, was due the merit of again opening up this interesting field of knowledge, of adding many new facts, and especially of pointing out clearly the distinctions of class, order, genus, and species; but in his generalizations he was, in some points, inferior to his great predecessor, whose classification he in the main adopted. Cuvier had given a great impulse to the science; and, by dint of vast research and unusual capacity for generalization, had worked a far more complete and satisfactory classification than had hitherto been attained. His classification had been generally followed in the early part of this century; nevertheless, there were felt to be some defects in it, and the minds of anatomists had been preparing for some modification of it. It was the lecturer's good fortune to have the opportunity of examining many animals which had not before been dissected, especially those from Australia, which had been brought over to our Zoölogical Gardens; and he had been enabled to establish the separation of the marsupials and monotremes as a distinct class. Nevertheless, he did not feel quite satisfied, and had bestowed much labor for many years upon the investigation of the characters of the brain in the different classes of animals; and, two years ago, he felt himself strong enough to draw out a classification of mammals founded upon the differences in the characters of the brain. That organ consists, in mammals, of four parts—the cerebellum, the optic lobes, the cerebral hemispheres, and the olfactory lobes.

In the lowest order of mammals—the non-placentalia—which includes the monotremes and the marsupials, there is no connecting medium or commissure (*corpus callosum*) between the cerebral hemispheres; and these parts are very small. These animals, therefore, he names LYENCEPHALA, or loose-brained. He had paid particular attention to the habits and characters of these animals, to ascertain with what peculiarities the absence of so important a part of the nervous centre is associated; and he found that there is in them a remarkable want of *memory*. The keepers in the Zoölogical Gardens observe that these creatures do not become familiarized with them, or recognize them. And though, in external features, some of the non-placentals resemble certain of the members of the placental class, yet the following difference may usually be remarked: The member of the latter—a carniverous animal, perhaps—when put into his cage, will at first seek to discover means of escape, will try

every panel, and search every corner; but, having spent a day or two in this way, he gives up the search as useless, and resigns himself to the occupation of walking to and fro in his den. The lyencephalous animal, on the contrary, unable to profit by the experiences of former trials, continues over and over again to repeat the same fruitless efforts to liberate himself.

The metropolis of the marsupials is Australia; and the pouch, into which the young is conveyed immediately upon birth, to be protected and fed, serves as a sort of portable nursery, enabling the mother to carry her offspring about with her. This must be associated with the remarkable dearth of water which is often experienced in Australia; one or two, or even nine years, sometimes passing, during which there is scarcely any rain. In this time, the pools, and even the rivers, become dried up; and the animals must travel many miles in search of that necessary of life—water. Were they, under these circumstances, obliged to leave their young behind, these would perish ere their return.

As an evidence—one to his mind the most striking—of design in the work of creation, Professor Owen instanced the provision for the feeding of the young marsupial. While in its mother's pouch, it is too young and feeble to make any effort to provide for itself. The milk must be forced down its throat, and would find its way into the trachea, as well as into the œsophagus, were it not that, during the process of feeding, the larynx is carried forward to the back of the nostrils, so that the milk can pass safely down on each side of it while respiration goes on. There is a provision in the mother to propel the milk into the mouth of the young; and there is this provision in the young to secure the proper transit of the milk into the œsophagus. If, in the coincidence and adaptation of these provisions to one another, there is not design, where are we to look for it?

The next class of animals he calls LISSENCEPHALA; because in them the cerebral hemispheres, though larger than in the preceding class, and united by a transverse commissure, are quite smooth—that is, without convolutions. This includes the rodentia, bruta, insectivora, and cheiroptera. They are cosmopolitan, being found in all parts of the world, though a large number of them are natives of South America, and some are confined to that region. The instincts are commonly much developed in them.

Under the name GYRENCEPHALA he classes the animals in which the increased amount of gray matter requires for its packing that the exterior of the cerebrum be thrown into convolutions or *gyri*. This part of the brain is also much larger than in the former classes. The cetacea, sirenia, toxodontia, prob scidia, terissodactyla, artiodactyla, carnivora, and quadrumana, are included in this class.

The Professor pointed out some of the chief distinguishing features of the several orders, particularly with reference to the locomotive organs and the teeth. He drew attention to the fact that, in animals where the numbers of the toes are even (as in the ruminants, where there are two; and in the hippopotamus, where there are four), the stomach is complicated in its structure, and the colon is simple;

moreover, the articular surface of the astragalus is divided into two equal, or nearly equal, parts; and the structure of the teeth is symmetrical: whereas in the animals, where the number of the toes is uneven (as in the horse, where there is one; in the rhinoceros, where there are three; and in the elephant, where there are five), the stomach is a simple bag; the colon is more complicated; the articular surface of the astragalus presents unequal facets, or only one; and the structure of the teeth is unsymmetrical. Further, in the even-toed animals, it is very curious that the horns are always in pairs, usually two; or, if more than two, there are four, two being placed behind the others: whereas, in the uneven-toed animals, there is rarely more than one horn, which is in the middle line; and if there be more than one, as in the two-horned rhinoceros, they are still not in pairs, but in the middle line, one behind the other. Thus some countenance is given to the Platonic idea of the prevalence of numbers.

The highest class, ARCHENCEPHALA, which comprises only man, is distinguished by the great development of the hinder lobes of the cerebrum; these quite covering the corpora quadrigemina and the cerebellum. The posterior horns of the lateral ventricles, and the hippocampus minor, are peculiar to man, not existing in any other animal. Coincident with this perfection of the brain, we find a corresponding perfection of the other organs, as evinced by the more complete manner in which particular parts are devoted to particular purposes. This is especially seen in the case of the foot, which, by the strength and conformation of its components, and by the construction of the great toe, is enabled to do the whole work of bearing and propelling the body, so that the upper pair of limbs are left free to minister to the intelligent will.

The Professor concluded by an eloquent appeal to his audience to set a proper value upon that marvellous mechanism with which they were gifted, and which was fitted to be, and which ought to be, the tabernacle of the Holy Spirit.—*British Medical Journal, May 21st,* 1859.

Medical Notes from the Continent.

We continue our extracts from *Dr. Mercer Adam's Medical Notes from the Continent*, published in the *Edinburgh Medical Journal*, by giving the remainder of the article on the University of Würzburg, which includes a sketch of the celebrated accoucheur, Scanzoni.

Scanzoni next demands our attention. He it was who attended the Empress of all the Russias at her last accouchement, and was presented with the munificent fee of about £5,000, perhaps the largest *honorarium* which any continental physician ever received. The *prestige* with which his favorable reception at the Russian Court invested him; his undoubted skill, and widely-spread fame, as an au-

thority in female diseases, have rendered him the most celebrated and popular of continental accouchers. Everv summer crowds of the French, German, and Russian nobility and aristocracy flock to Würzburg to consult him ; and the principal hotels there during the season are like so many fashionable hospitals, filled with his lady patients. I remember that I considered myself very fortunate in getting possession of the only vacant apartments in the *Kron-Prinz*, just as they were vacated by a *Gräfin*, or German Countess, who had been under Scanzoni's care. Nor is he only busily employed during the summer months; for when the *Kurzeit*, or season, is over at the Spas, when the pleasure seekers and invalids have left Baden-Baden, and when the gambling-rooms of Wiesbaden and Hombourg are deserted alike by the fools and blacklegs who had thronged them in summer, the little spas of Kissengen and Brückenau, in Bavaria, preserve their vitality, being constantly frequented by visitors, who desire to be in proximity to the great obstetric physician of Würzburgh. Scanzoni has earned his great reputation while still comparatively young. He is a man of forty, slightly above the average height, and with a slim, well-made figure. His complexion is fresh, and his long, light-brown hair, carefully brushed back from a large, well-developed brow, falls in negligent masses behind. He has a cheerful, open countenance, and a merry eye ; his face generally wears a smile, and a touch of quiet humor lurks about the angles of his mouth. His manners are peculiarly affable, and all who have enjoyed the pleasure of his society must retain, as I do, the most delightful recollections of his friendly courtesy. Scanzoni's unprecedented success has not lost him to science. We all know how often this is the result of a man gaining the ear of the great public, and becoming what is called a "fashionable physician ;" how often he ceases to investigate disease, or to contribute to medical literature as in days gone by ; and how often the clink of golden guineas dulls his ear to the calls of science. There are among us, no doubt, many most honorable exceptions—men who scorn all fashionable quackery, and who, in the midst of an extensive and harrassing practice, still contrive to cultivate science and medical literature, with quite as much success as their less busily employed brethren. Hofrath Scanzoni is a man of this stamp, and he fully deserves his fame ; for he continues to be as active and enthusiastic in the investigation of all that relates to obstetrics as he was in former days, when he was comparatively unknown.

The works of Scanzoni, like those of his colleague, Kölliker, are now so familiar to all scientific obstetricians—although singular to say, no English translation of them has yet appeared—that any special reference to their contents is quite unnecessary. His *Manual of Midwifery*, now in its third edition, is a most complete treatise on the subject , and his work on *Female Diseases* is eminently practical in all its details. He has recently commenced a periodical specially devoted to obstetrical science, which promises to be a very valuable addition to this department of professional literature. It is entitled *Contributions to Midwifery and Gynæcology*, and contains, not only

contributions from his own pen, but also from many other writers of note. In the third part, recently published, Scanzoni relates a most interesting case of death induced by passing carbonic acid gas into the uterine cavity. The reader is doubtless aware that, of late, carbonic acid has been extensively used, not only as a local anæsthetic of undoubted efficacy, but also as a means of exciting the muscular activity of the uterus, in the induction of premature labor. The unfortunate patient was a woman aged thirty, who had a large, painful, fleshy tumor, of bluish-red color, and as large as the fist, attached to the vulva; and who had also a disease of the cervix, and, what afterwards proved to be, a large dropsical cyst of the uterus. Before commencing an operation for her relief, a stream of carbonic acid, as an anæsthetic, was passed into the vaginal canal; but hardly had two or three cubic inches of the gas entered the cervix, when the patient screamed out, "The air is entering my abdomen, my head, and my neck!" Alarming symptoms immediately ensued; great rigidity of the whole body; labored respiration; small pulse, and coldness of the extremities. In spite of all the remedies applied, the patient sank, one and three quarter hours after the introduction of the gas into the vagina. Scanzoni considers that death may be accounted for in two ways: *firstly*, by supposing that the gas entered one of the large uterine vessels and occasioned a fatal result, just as sometimes happens, from the entrance of air into the veins in surgical operations; or *secondly*, by the hypothesis of a veritable intoxication, produced by the gas. He admits that objections may be raised against both of these views, but he considers that the first theory is more likely to be correct than the second. The first hypothesis seems opposed by the fact that, on the careful examination of the uterus, not a single injured or gaping vessel could be found, which could admit the gas into the circulation; and, moreover, it is worthy of remark, that death did not occur for an hour and three quarters after the introduction of the gas, whereas, on the entrance of air into the vains, the fatal result usually takes place very quickly—sometimes in a few minutes. Against the intoxication theory may be adduced the facts, that proportionably very large doses of carbonic acid may be brought into contact with the blood, through the medium of the respiratory and digestive passages, without any poisonous effects being produced; and further, that, in numerous instances, this gas has been passed for a long time into the vagina, without giving rise to any dangerous symptoms whatever.

As a clinical instructor, Scanzoni surpasses most obstetrical teachers in rendering his pupils adepts in correct diagnosis. I remember hearing him deliver a clinical lectnre on the differential diagnosis of fibroid pelvic tumors, from pregnancy, fibrous tumors and polypi of the uterus, which was quite a masterpiece for its lucidity and simplicity. He has large clinical wards for patients with female diseases allotted to his care in the Julius Spital; and he gives instruction in practical midwifery in the *Entbindungs-Anstalt*, or Lying-in Hospital, a handsome new building, near the Julius-Spital. This institution, which is principally supported by allowances from the government

exchequer, and also in part, by the fees of the students and midwives who attend it, is well worthy of the medical school of Würzburg. It is intended for the reception and care of poor women at their confinements; for the shelter and private delivery of pregnant women who wish their accouchements to be kept secret; and for affording a good school for the instruction of medical students and midwives in practical obstetricy. The very poor are, of course, received gratuitously, but nearly all the patients contribute something for their maintenance and treatment. The rates charged vary according to the accommodation afforded, etc,; and the patients are divided in three classes: the first pay 2s. 6d., the second 1s. 2d., and the third as low as 3d. a day. Patients of the latter class, however, in consideration of the low rate of board charged, are expected, if strong and well, to render assistance in the general household work of the establishment. The maximun length of residence allowed in the *Entbindungs-Anstalt* is fixed at six weeks, but exceptions are made in favor of poor women who are in ill health, and demand medical attention during pregnancy, and also in the case of rich patients who desire a refuge within its walls for a longer period. On the reception of a patient into the hospital, the following particulars are recorded in a book: Name, surname, age, and place of birth; date of admission; number of pregnancy—its beginning, its present stage; time of expected confinement; any personal peculiarities, etc., worthy of notice; and columns are further provided for the registration of the date of the discharge, and whether or not the mother was accompanied by her child. The institution contains about 130 beds, and about 50 are, on an average, constantly occupied. The number of berths averages about 350 annually. The whole of the interior is furnished with a view to elegance and comfort; and the system of ventilation throughout the building is quite unexceptionable. Around the hospital are neatly-laid-out gardens, which serve as airing-grounds for the patients. Each of the first-class patients is allotted a neat little room for herself, which is elegantly fitted up with furniture made of walnut wood, consisting of a bed, table, sofa, chest of drawers, and several chairs—with occasionally an extra bed for the attendant nurse. The second-class patients have also separate apartments, similarly fitted up, but with furniture of a plainer description. In each room a cosy little child's cot stands beside the bed of the mother. Patients of the third class sleep in dormitories, which are well lighted, and exceedingly clean and comfortable. In one part of the establishment, there is a suite of about six or eight apartments, and which is called the *Geheime-Abtheilung*, or secret department. This feature distinguishes many of the German Lying-in Hospitals—as we shall afterwards have occasion to mention when speaking of the Vienna hospitals—and it enables the victims of seduction and illicit love to conceal their shame from the open gaze of the world. Here, the young lady, who has "loved, not wisely, but too well," may retire from society before her disgrace becomes apparent—her friends believing meanwhile in some pleasing fiction, that she has gone on a tour

to visit England, or to enjoy the gayeties of Paris. Here she enters, seen by no human eye, save that of the hospital attendants, who are all trustworthy, and sworn to implicit secrecy; here she lives till her confinement is past—never called by her name, but merely designated by her number; and when that event is over she again passes out into the world, and perhaps talks of the celebrities she has seen in Pall Mall or Rotten Row, or of the fascinations and beauties of the Champs-Elysées. The object, in providing such facilities for the concealment of illegitimate births, has doubtless been the prevention of criminal abortion (a crime as heinous as murder in the eyes of the Roman Catholic Church) and infanticide; but the effect of these provisions on the public morals cannot be very good.

For the reception of puerperal women there are four excellent wards, with water-closets attached; and there are also sick-rooms for patients who have abnormal deviations from the ordinary process of recovery after labor. Each sick-chamber has a little kitchen annexed to it, for preparing cataplasms, cooking food, etc. There are lavatories in all the passages; and I was shown one or two large and cheerful work-rooms, where great numbers of the poorer patients were all busily employed—as is the custom with the German peasantry—spinning away with their "rock and wee pickle tow."

In the upper part of the *Anstalt* is a large hall or ampitheater, called the *Entbindungs-Saal*, or accouchement-room, wherein the patients of the third class are delivered by the students, under the direction of the professor or the assistant physician. Seats are arranged, in a circular form, round the room, for the accommodation of the students; and in the center of the space which they inclose stands an obstetrical bed, which is something quite unique. It resembles in general appearance the ordinary German beds, which are simply long and not very broad wooden boxes, raised on four legs, and having no posts or curtain-hangings of any kind. This bed, however, rests on a strong, central, circular piviot, which enables it to be turned round easily in every direction. It also admits of being separated, transversely through its centre, into two halves; and this is done when turning, or any instrumental interference, is necessary. The lower half being then withdrawn, and the patient placed in the lithotomy position, the operator enjoys great freedom of action in every direction. The bed is also furnished with two movable wooden handles, which can be shifted higher or lower for the convenience of the patient, and by grasping these she can have a firm support during the labor-pains. Whenever a patient is seized with labor-pains, the clinical students are specially summoned to attend at the *Entbindungs-Saal* and witness her delivery. One of their number is selected to conduct the case, under the superintendence of the professor or his assistants. It cannot be denied that there are many advantages connected with this mode of teaching clinical midwifery, but the publicity and exposure which it entails are attendant evils, that render it repugnant to British notions of propriety, and preclude the possibility of its importation into this country.

Professor Scanzoni kindly accompanied me through the whole of

the excellent museum attached to this hospital, and showed me his collection of valuable obstetric instruments. His new cephalotribe struck me as a very beautifully devised instrument, infinitely simpler in its construction, and easier in its working, than the cephalotribes of other physicians. In Germany, this instrument has completely superseded the perforator and crochet in craniotomy cases ; and I feel quite convinced, from what I have seen of its use, that if British accoucheurs would only give it a fair trial, that it would soon come into general employment in this country also. Scanzoni s cephalotribe is not more difficult of application than the ordinary forceps ; it is easily worked, and is devoid of all the dangers to the mother attendant on the employment of the old-fashioned crainotomy instruments. The museum contains a large selection of interesting anatomical preparations. Among them is a curious specimen of a uterus, with a rudimentary appendix on its left side, in which an ovum—which had descended from the right ovary, and had traveled thither through the fundus of the large uterine cavity—was developed into a fœtus of four or five months old. The mother died at this stage of her extra-uterine pregnancy, although she had before been thrice safely delivered of children, and had once aborted with twins. At the *post mortem* examination, the ruptured sac of the fœtal membranes was found in the appendix I have referred to, which constituted a true horn of the uterus. This horn or appendix was attached externally to the left fallopian tube and ovary, and on its internal or right side it was united to the fundus of the uterus by a band of connective tissue. A narrow passage perforated this connective tissue, which admitted of the passage of a probe, and constituted a true communication between the fundus and the appendix. No cicatrix was found in the left ovary ; but in the ovarium of the right side there was a distinct corpus luteum, about six lines in length, which indicated the point from which the ovum came, which, after wandering through the whole of the uterus proper, found its way along the narrow passage into the abnormal horn, and was there developed into a fœtus. Probably no similar instance of the wanderings of an ovum in the human subject is upon r cord ; although Bischoff, the embryologist, was aware of their occasionally traveling in this manner in the lower animals. The peculiar abnormality is also very uncommon. I believe that Rokitansky only knew of one similar case of a rudimentary appendix attached to a uterus.

The museum contains many fine specimens of the various deformities of the pelvis, and among them is a preparation of great interest, illustrating the curious anomaly, first described by Kiwisch, which is termed by Lambl, of Prague, Spondylolisthesis. This deformity consists in a dislocation forward of the fifth lumber vertebra and the upper segment of the sacrum into the hollow of the pelvis. This preparation has been minutely described and accurately figured by Dr. Lambl, in the last part of Scanzoni's *Beiträge*.

We have still much to say concerning other professors and teachers of the Würzburg school, but the length to which the present

paper has already run forbids me entering into details. Scherer, the professor of chemistry, is well known as one of the best organic chemists; Linhart, formerly teacher of surgery at Vienna, is an able clinical professor, a very expert operator, and author of a capital treatise on operative surgery. The oldest professor, the venerable Hofrath von Textor, lectures on surgical instruments, and their uses; the Hofrath, Dr. von Marcus, teaches psychology and history of medicine; and Professor Rienecker gives excellent lectures and clinical instruction on the diseases of children. Ophthalmology is taught by Professor von Welz; and comparative anatomy and microscopy by Professor Heinrick Müller. The latter physician is distinguished by his papers on the retina, and has made the finest preparations extant illustrative of its structure.

And now, in conclusion, I would say, very briefly, that I am not acquainted with any school of medicine which, taken all in all, offers more solid advantages to a hard-working student; and a few weeks could not be more profitably employed by any physician from this country, who is able to speak and understand German (for in Bavaria, even among educated men, the stock of English is rather scanty), than in attending the cliniques, and hearing the lectures of the distinguished men whom I have mentioned, in the delightful old city of Würzburg.

Quinia in Peritonitis.

The experiments made of late years by Legrouz, Monneret, Andral, Trousseau, and other celebrities connected with the French school, have proved, beyond a doubt, the beneficial influence of quinine in large doses in the treatment of acute rheumatism, and other diseases of a similar type. Recently this same medicine has been vaunted in combatting certain forms of peritoneal inflammation occurring in connection with the puerperal state, and more especially by M. Beau, who, during his official connection with the Cochin Hospital, employed it in an immense number of cases where that formidable disease prevailed in an epidemic form. So marked was the success which attended his experiments, that he ultimately arrived at the conclusion, that quinine in large and continued doses, if not a specific in that disease, is at least the most valuable, and at the same time most powerful curative agent we possess in its management and treatment. Entertaining such views in reference to the value of quinine in puerperal peritonitis, it was exceedingly natural that he should try the same remedy in a similar affection occurring apart from the puerperal state; and hence we find, that in the idiopathic form of peritonitis he has recourse to the same mode of treatment, and urges on his pupils its decided superiority over every other with which he is acquainted. In a disease of this kind, which, in spite of the most active and energetic measures we may adopt, most

generally pursues its fatal course with amazing rapidity, we are always disposed to accord a favorable reception to any theory, however novel and unsupported by facts it may be, provided only we be told that its practical application has been followed by merely partial success; and we are always most agreeably surprised when, with preconceived notions unfavorable to the theory, we find ourselves confronted with a single fact which, though it may not completely establish the new doctrine, at least enlists our sympathies in its favor. Such was the surprise which we experienced in reference to the quinine treatment recommended by M. Beau, when we witnessed, for the first time a fortnight ago, a genuine case of idiopathic peritonitis treated and cured by this medicine, to the entire exclusion of every other therapeutical measure. To those who have been taught in early life that inflammation of the peritoneal membrane demands, in the majority of instances, the abstraction of blood—if not generally, at least locally—until a powerful impression be made on the system, and that this heroic plan of treatment must be followed by the assiduous exhibition of calomel until the patient be brought under the influence of this powerful and dangerous mineral, the solemn declaration of a man of high authority and great experience, to the effect that such treatment is not only useless but positively pernicious, cannot be viewed with any other feeling than that of amazement; and yet, reluctant though they be to abandon a system which has been inculcated in their youth, and which they have been accustomed to regard as strictly orthodox, they must resign themselves to seeing it demolished by another diametrically its opposite.

As a sequel to the foregoing remarks, we cannot do better than place before your readers the following case, the details of which we extract from our Medical notes taken at the bedside of the patient. A girl, 24 years of age, was admitted into the service of M. Beau, at the Hôpital la Charité, and on examination the following symptoms were recognized. Over the lower part of the abdomen there were great pain and tenderness, which were increased on the slightest pressure; the pulse was small, hard and quick, averaging about 120 beats in the minute; the skin was hot, dry, and harsh; tongue furred; constant nausea, with occasional vomiting; constipation; the features were pinched, and the countenance indicated much anxiety; respiration hurried; complexion muddy, and the conjunctiva slightly yellow. The patient lay on her back, with the legs flexed on the thighs. Her previous history showed that for some weeks prior to the invasion of the disease she had been in an indifferent state of health, which she attributed to an unusual amount of bodily fatigue to which she had been subjected. In the presence of these symptoms, M. Beau at once pronounced the case to be one of acute peritonitis. Treatment: an emetic, composed of ipecac. and tart antimon. was ordered, to be followed up by a purgative enema. The feeling of nausea having thus been removed, and the stomach prepared for the administration of the sulphate of quinine, this medicine was prescribed as follows: two grammes (equal to thirty grains) were ordered to be divided into three doses, one of which was to be

given every eighth hour, and a blister was applied to the lower part of the abdomen, over the spot where the pain and tenderness were greatest. After four or five doses of the quinine, its physiological effects, such as deafness, ringing in the ears, etc., began to manifest themselves, and consentaneous with these there was a manifest diminution of the original symptoms. The pulse from 120 was reduced to 110; the pain and tenderness of the abdomen were considerably subdued ; the febrile symptoms, generally, were greatly modified, and the countenance became more placid. The quinine was ordered to be continued, together with the use of refreshing drinks, and on the fourth day of the treatment the pulse fell to 100, acompanied by corresponding improvement in all other respects.

In a week or ten days from the commencement of the treatment, the full effects of the quinine having been produced, that is to say, the original disease having been, as it were, overcome, the medicine was gradually diminished, and ultimately discontinued. The pulse has fallen regularly, and the patient is now convalescent. Now, in a case like the above, implying the undoubted existence of inflammatory action of a most important membrane, the indication, according to the notions generally entertained, would be abstraction of blood, if not from the arm, at least by the application of leeches over the seat of the disease ; and we venture to say, that in a similar case such would be the practice adopted by a large proportion of medical men. But according to the theory of M. Beau, instead of curing the disease, the abstraction of a single drop of blood would only increase the evil, and ultimately lead to a fatal result. In peritonitis, and in the phlegmasiæ generally, the blood, according to Beau, is poor in red globules, and consequently rich in fibrin; in other words, the increase of the latter is in a direct ratio to the diminution of the former. It is not difficult, therefore, to understand his determined opposition to depletion, and other measures calculated to lower the vitality of the blood. He regards the excess of fibrin as the real pathological condition on which this disease depends ; that is to say, he regards the fibrin as the phlogistic principle, and whatever tends to augment the fibrinous portion of the blood must of necessity increase the fever and feed the disease. Consonant with these views he considers anemia, which is always characterized by diminution of the red globules of the blood, as one of the principal predisposing causes of the phlegmasiæ ; and when this condition of body exists, exposure to cold and wet, to sudden change of temperature, or to any of the other exciting causes of inflammation, may be followed by an attack of acute peritonitis. Quinine being the sheet anchor of M. Beau, as we have shown, in the treatment of this disease, it will not be out of place here to indicate some of the leading rules which he lays down in reference to the manner in which it should be employed, and on the rigid observance of which the success will depend. It is necessary that a decided effect be produced on the system at once, and hence the earlier the quinine is exhibited after the malady has declared itself the better. But in every case he deems it advisable to premise the first dose of quinine with an emetic ; to be followed

up by a purgative enema. As soon as the stomach is prepared to retain the quinine, he gives the latter to the extent of eight grains every eighth hour, and this quantity of the salt must be continued for several days in succession. It is right, however, to observe that the dose must be proportioned to the sensibility of the patient; that is to say, it must be increased should the intoxication produced by it prove too feeble, and diminished in the event of its being too strong. M. Beau has never, in the course of his experience, had occasion to prescribe a larger dose than four grammes (60 grains) of the salt in the twenty-four hours. Even when the inflammation of the peritoneum is limited to one spot, and when the malady has been to a certain extent overcome, it becomes imperative towards the second or third day to increase the dose of the salt to a small extent, as the system becoming accustomed to it, the quinine in its original dose would not suffice to maintain the mastery over the disease. For the same reason the medicine must not be diminished too rapidly, nor discontinued too early. Beau states that he has seen cases in which, up to the eighteenth day of the disease, he could not suspend the medicine without such suspension being followed by a recurrence of the febrile symptoms. Should the stomach from excessive irritability reject the quinine (by no means an uncommon occurrence), it should again be administered in some other form, so that if one form does not suit another may. When, notwithstanding the form in which it is administered, the stomach obstinately refuses it, the quinine may be given in the form of enema, as experience has proved that its absorption readily takes place when given in this manner.—*Correspondent of the Med. Times and Gaz.*, July 2, 1859.

Nasal Polypus Removed by a new Forceps.

Mr. Gant stated, that having somewhat frequently had occasion to remove nasal polypi, he had experienced some difficulty, and even danger, in doing so with the ordinary serrated forceps. It was an unsurgical proceeding to attempt to detach a polypus from the nasal fossa by twisting its peduncle. Not to mention the acute pain of such an operation, it is also ineffectual. If the polypus be soft, as usual, it is apt to come away piecemeal, and require more than one operation for its removal, or should the polypus be harder than usual, we may accidentally bring away a portion of either spongy bone between which it is more commonly attached, or we may, perchance, injure the delicate septum narium. Surrounded, indeed, as a nasal polypus is by delicate bony structures, we can scarcely venture to wrench it away from its osseous attachments without some risk of injury thereto. This misadventure is followed by "carious disintegration" of the exposed bone, accompanied by a fetid and persistent discharge.

To meet these difficulties, Mr. Gant has recently invented a pair of forceps, which *cut* and hold at the same time. One edge of either

blade is finished off somewhat like that of an ordinary scissors; the other edge is broad and *rasped*. This combination of scissors and rasped forceps is a modification of the grape or flower scissors of the conservatories. The danger of hemorrhage, on which so much stress is laid in the books, as the main reason for twisting rather than cutting a nasal polypus, would seem to be an error. Very little hemorrhage attended the operation we witnessed. It would seem that the forceps in question sufficiently compresses the blood-vessels to arrest hemorrhage, and Mr. Gant particularly called attention to the fact, that operations with his instrument "were as bloodless as they were painless." Nor in his experience did nasal polypi so removed return.

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

Elements of Medicine, a Compendious view of Pathology and Therapeutics; or, the History and Treatment of Diseases. By SAMUEL H. DICKSON, M.D., L.L.D., Professor of the Practice of Physic in Jefferson Medical College, Philadelphia; formerly Professor of the Institutes and Practice of Physic in the Medical College of the State of South Carolina, and of the Theory and Practice of Medicine in New York University. Second Edition Revised. Philadelphia: Blanchard & Lea, 1859; pp. 768.

Our readers are aware that the first edition of this work made its appearance in 1855—the one before us, therefore, is the *second* edition. In the preface the author states that he has revised this very thoroughly, so that it may be regarded as presenting, within a small compass, an outline of what is acceptable on the History and Treatment of diseases.

We have given this book, which is on the most important branch of Medical Science, a slight examination.

It emanates from the hand of a veteran practitioner and teacher, and who is at present the occupant of the Chair of the Practice of Physic in the Jefferson College, Philadelphia.

As might *a priori* have been expected, the book presents a very good digest of practical medicine. It is conservative, but not to a faulty extent, with reference to old and long tried principles; and

in regard to things new, there is a very fair degree of judgment exhibited.

What we have said, of course, relates to the work generally. There are some opinions expressed of which we do not, at present, see the propriety. Perhaps, however, a little time may set us straight.

Typhoid Fever—Speaking of this, now, to most practitioners, familiar disease, the author has several remarks that we will briefly notice.

He agrees with Wood, that the term *Enteric Fever*, is more significant than *Typhoid*. This looks like a small matter, but it may mislead. If the student gets the name *Enteric* in his mind, he will naturally suppose that the disease is one of the bowels—that the bowels are primarily and constantly affected. *Enteric* (from *enteron* an intestine) relates at once to the bowels; and applied to the fever under consideration, locates it in the bowels. Now, there is no evidence, at all conclusive, that typhoid fever has *any special* location. The evidence is just as strong that it has not—that it is purely *idiopathic;* that in the language of the older pathologists, with reference to a cognate disorder, "it has its seat every where and no-where." For fifteen years we have seen more or less of the complaint, and we may say that we have seen nothing to induce us to believe that structural lesions, of any kind, are necessary as elements of the "*pathos*." Their existence, when present, has the relation of *effect,* rather than of cause; and it is this fact that explains their diversity, one epidemic having them mostly located in the head, another in the chest, another in the abdomen.

Broussais and Louis have made the impression that the disease is not only symptomatic in character, but due to structural lesions of the digestive tube. Audral, however, and others, have shown that such is not the case—that we have very many cases of what Louis would call the "*Typhoid Affection*," or Broussais, Chronic Gastro enteritis, in which there is no lesion whatever in the bowels.

Such being the state of our knowledge with reference to *typhoid* fever, we do not see the propriety of changing its name to *Enteric Fever*—a name that implies not only that it is *symptomatic*, but that it is essentially one of the intestines. We like the term *typhoid* (from "*typhos*," stupor, and "*eidos*," like) the best. If it signifies but little, it is not likely to mislead.

Proper nomenclature can only be attained by consulting carefully every element. A term that expresses but an occasional one, or

one that although constant, is insignificant, will amount to but little in the advancement of our knowledge of disease.

The circumstances taken into consideration, under which typhoid fever originates, favor the hypothesis that it is idiopathic, primary, one not depending upon any other disease. Its commencement is often due to causes that operate so as to depress, or rather, perhaps, degrade, the two great functions, Innervation and Circulation. Instances of this character make their appearance in rural districts frequently, and in localities proverbially free from malaria. They are of such a character as to fill completely the idea we have of "spontaneous origin." Another class of cases can, without any trouble, be traced to "crowd poison," *ochlesis.* A poison is generated by persons being crowded together, or in the sick chamber, that infects most of those who are exposed to it for any length of time.

Whether, then, originating in either of these modes, the disease is a general one, and if one part of the organism more frequently than another is affected, it is the blood. If the complaint, therefore, is to be named from the locality most constantly implicated, why not adopt the name, *Blood Fever.*

Treatment.—We have said more than we intended on the Author's nomenclature, and shall have but a word or two on treatment which, after all, is the most important.

The Author takes his place among the "Jugulators" in the treatment. He believes that the disease can be "cut short" during its course. Hear him: "I believe it to be possible, not only to diminish the violence and danger of the symptoms in a great majority of cases, *but in many to shorten the course.*"

Such are the views of physicians generally who have little or no experience. We have, however, seen no one up to this time, who has practiced in an epidemic of *typhoid* fever, who believes in such doctrine. Our own impressions are, that when typhoid fever is once fairly inaugurated, it cannot be shortened in its course, that we can about as easily *stop* a case of scarlatina or small-pox in the middle of its course, as a case of this fever. The disease, like small-pox, elaborates a poison, which will produce the same symptoms in another; and for this purpose a certain length of time is required. Palliation is practicable but not *jugulation.* An attempt at the latter often produces complications.

Blood letting in Typhoid fever.—This is one of the remedies proposed by the Author. He says: "If the brain be prominently threat-

ened and the pulse and strength permit, it may be well to take blood from the arm; but this is very rarely necessary or proper." It would puzzle almost any one to know to what extent the above recommendation is limited by the latter clause of the sentence. We had supposed that the doctrine had become general among pathologists and practitioners that general blood-letting is not only of no use, but decidedly injurious; that the indications for its use, one of which is mentioned in the above quotation by the Author, are fallacious; that the seeming engorgement, congestion, or inflammation, is more safely and efficiently controlled by other means—as mustard, fomentations, cold water, etc.

The microscope and crucible show the blood to be in a diseased state—its corpuscles broken to pieces, and its fibrine gone. In this condition it would seem to be feeble enough for its great work, without being any further crippled. The question, however, does not rest on theoretical considerations. The practical use of the remedy condems it. The acute cases of the disease, the very ones that it would seem ought to be benefitted by it, bear it the worst—at least such is our experience. Those who have been extensively engaged in actual conflict with the disease speak well of the sustaining plan of treatment. With Graves they agree in the "feeding plan," avoiding carefully every measure or drug calculated to waste strength.

"Should the disease resist these remedies and progress, or remain obstinate, I would not hesitate to resort to the mercurial treatment. Small doses of calomel combining it with very small amounts of ipecacuana, to determine to the skin, may be persisted in at moderate intervals, until the gums become spongy and the mouth is gently touched."

Such are the suggestions of the Author when his drugs for "stopping" the disease have proven ineffectual.

The mercurial practice, now obsolete in even malarious fevers where it was most efficient, we were surprised to see recommended in the protracted cases of typhoid. The getting up of the mercurial disease does not have the effect of superceding the typhoid. The latter progresses just as well after the "gums become spongy and the mouth gently touched," as before. In a word, the two diseases are not incompatible; and as a consequence, the effect of the practice recommended is to get two diseases on your hands instead of one.

We have no time for a further notice of this book. As we said in the commencement, on most points, it is fully up to the times. And we like very much the Author's style. On Typhoid fever, however, it certainly has the ring too much of "*Old Physic*."

PART FOURTH.

EDITORIAL AND MISCELLANEOUS.

The Past—The Future.

The present, is the first number of the twelfth volume of our work. We commence this volume in the hope of being able to improve upon all former ones. The little experience we have had has taught us many things that are pleasant and valuable; and some that we would rather not have known.

Our acquaintance with medical men has been very much extended; and we may say that the more we know of them, the more we are satisfied that they constitute the most useful and intelligent class of community. They are the ballast of society. The other learned professions have been invaded and victimized to an alarming extent by the speculative epidemic that for a few years has distracted every department of society. Indeed, we can scarcely point now to a prominent man in Law or Divinity who is *compos mentis* on Medicine —"right on the goose." They have almost universally been made the prey of the nonsense of the age; and we need expect no more from them than from the rank and file of the community. Medical men, having had their minds occupied more with Natural Science, with realities, have acquired care and caution in all their intellectual movements. They believe only when the proper evidence is furnished, and they owe their high conservative influence to the fact, that they get to be, from their calling, superior judges of what is evidence.

We did not, however, sit down to write a panegyric on medical men. What we have said therefore will do on that subject for the present.

We are in the receipt of numerous letters from distinguished physicians expressing approbation of the course we have pursued in the past,

and hoping well for us in the future. For all such testimonials we feel thankful; they strengthen our hands for the work before us, and we hope never to be less deserving of them.

We shall in the future try to make the Journal more interesting in the way of original matter, and more thorough in reviews. To accomplish the former we need the co-operation of the profession. Medical men should, every where, recollect that they can make themselves useful by keeping a record of what is passing before them, and transmitting what of it is unusual or new to the Journals. In this way our stock of knowledge is increased, and the profession made efficient in the great objects for which it was instituted. Very much of the most valuable of our information has been thus accumulated. Jenner was but an humble practitioner when he made his great discovery; and peruvian bark, the most important drug ever known, was first brought to the attention of medical men by one not even a member of any learned organization. If, therefore, medical men engaged in actual daily conflict with disease will only preserve and transmit their observations, the original department of the Journals may be much improved. There is great and especial need for this in the Mississippi Valley. With reference to our knowledge of the diseases of this immense region, we are as yet in the formative stage. There is, if such a term be allowable, a pathological idiosyncracy here that needs investigation, and that no one can investigate thoroughly but the practitioner of the region. To the Gentile it is Greek. Who knows any thing of *Yellow* fever except those who have wrestled with it? And we may also ask, who knows any thing of the Malarious fevers of the west and south, as well as those who have battled with them for a life time.

Our reviews of books have not been as thorough as we could have desired. But standing between the Author and Publisher on one side, and the reader on the other, we have endeavored to be just. Most works that have passed through the press, within the last few years, have been meritorious, and as a consequence could be safely and properly recommended to the reading public. All, of course, are not alike necessary or useful—still there is scarcely a book that has made its appearance but what contains something good or new, and is well worth the publisher's price.

We must, however, except certain publications that of late have made their appearance. We allude to those especially of Forbes and Bigelow—(*Nature and Art in the Cure of Disease. Rational*

Medicine.) These works contain nothing new on *Pathology* or *Treatment.* They, in substance, the former more ingeniously than the latter, hash up the old "*Expectant*" system of Stahl, and propose it as an improvement of the nineteenth century. The amount of ability invested in their sophistry has given it no little currency.

The doctrine of these men, if heeded, will change the practitioner at once into a skeptic with reference to the drugs of the materia medica, and unsettle all his views of pathology. In the language of the ancients, it converts the avocation of the physician into a mere *Meditation on Death.* If drugs have no power, and diseases get well of themselves, what use is there of a physician? What of a Medical Profession? Forbes aspired to the office of reforming abuses, and confined to these only his labors would have been well received. He has, however, not shown himself capable of distinguishing between reformation and *destruction.* His reformation is destruction.

Letting the thing down.—At the recent meeting of the American Medical Association, a committee was appointed to prepare a system of parliamentary rules, to be "as few in number, as concise and perspicuous as possible," for the government of the Association. The movement was based on the assumption that "parliamentary rules of order are numerous, complicated and sometimes obscure," and that "'medical men, from the nature of their pursuits, can not be expected to be familiar with them."

As we look at this proposition, it tends, with the greatest certainty, to embarrass the Association, and belittle the profession.

Suppose the committee reports, and the Association adopts, an abbreviated and simplified manual. If it corresponds with others nothing is gained. If it differs from the standards ordinarily recognized, of which every physician has some, and many of them the most thorough understanding, interminable confusion is inevitable. This we regard as too evident to require argument.

That the movement is belittling in its tendency, we regard as equally evident. The ordinary manuals govern every description of deliberative bodies, legislative, political, reformatory, ecclesiastical, scientific, &c , &c. Complications are liable to arise in any of them, bringing into requisition any, and every thing, regarded as standard. The fault is not in the manuals, but in the circumstances

that necessitate them ; and for us virtually to repudiate the ordinary methods of extricating ourselves, and do it by some short or simple method, looks like recognizing a state of baby-hood, with its indispensable milk and water aliment, that we are not willing to concede to the great American Medical Association. Not a bit of it. Let us have no letting down, but a *coming up*.

But we are not willing to grant the assumption on which the movement is based. True, we have many excellent men, and able physicians among us, who know nothing of parliamentary usages, and are not competent to preside over large bodies. But such is not *necessarily*, and from the nature of our occupations, *peculiarly* so. We ought to have our professional organizations, and convocations, just as other men—and to conduct them with just as much dignity and propriety, and with the fullest recognition of the ordinarily recognized standards of decorum, as the best and most intelligent of them. Besides, we are not only professional men but integral parts of society,—citizens,—and as such, there are many movements in which, if we would hold the place in the community which would seem to be assigned us, we are properly expected to participate, and have some knowledge of. Such occasions, and such as belong properly to our profession, give us just such opportunities, both in kind and degree, as most men have for learning parliamentary usages ; and, accordingly, we are not able to see a single good reason, for any efforts at simplification, in adaptation to a state of either actual or assumed puerility.

We sincerely hope that the committee will never report ; or if it does, that it will simply report in favor of the fullest recognition of the usages of the United States Senate, as embodied in our best manuals. Then if any gentleman should ever be called upon to preside over the deliberations of the association, who has not the requisite knowledge of such standards, he will have an excellent opportunity of making exhibition of his good sense by declining to act.

H.

Hebron Medical Society —This organization has been in existence since January, 1858, and is doing a good work. It is not a county organization as ordinarily understood. It is located in the south part of Licking county, O., at the village of Hebron, while its membership is from the adjoining counties of Muskingum and Perry,

as well as that in which it is located. The only feature of its organization which is peculiar, is contained in the following by-law: "It hall be the duty of every member of this society to report, at each meeting, one or more cases of disease that has occurred under his supervision, and to read an essay on any medical theme when required by the President at the regular meetings, and on failure to comply with the above requisitions the delinquent shall be subjected to a fine of one dollar for each offence."

We are gratified to state our impression that this is an efficient organization, highly creditable to all concerned. The gentlemen engaged in it, recognize duties above those of the mere practitioner—they have raised to the conception that they are *men of science*—that science is to be *cultivated*—and that they have a share in the work. May they never weary in well doing.

For the present year Dr. Jas. Watkins is President, and our friend J. R. Black is Secretary.

We hope to be allowed the pleasure, from time to time, of transmitting contributions to the profession, from this source. This notice was designed for our last issue, but was mislaid.

H.

Funeral Obsequies.—Our friends of the Nashville *Journal* evince a laudable desire to preach funeral sermons, and perform appropriate obsequies for their expiring cotemporaries. After touching allusions to the demise of the *New Hampshire Journal*, and the *Philadelphia Medical and Surgical Journal*, they seem disposed to attend to our case, as indicated by the following:

"It would be a matter of satisfaction to us if the *Journals* would promptly let us know when they die, that we may record their decease, and join the mourning circle of their relatives. Are the *Ohio Medical and Surgical Journal* and the *Montreal Medical Chronicle* also dead? We are induced to ask for information on this point, as we have heard nothing of them for several months, and are anxious on their account."

Although our friends of the *Nashville Journal* have possibly found "matter of satisfaction" on account of our Montreal cotemporary, we are compelled to inform them that it is denied them, so far as the *Ohio Medical and Surgical Journal* is concerned. It is not dead,

nor even sleepeth; and, judging its future by its past, *it never will die!* What "satisfaction" do you realize in that, sirs?

The temporary "satisfaction" of our cotemporary originated in the omission to transfer the name of the *Nashville Journal* to a new book which our rapidly increasing subscription list brought into requisition. We regret the mistake. We should be sorry indeed to loose the fellowship of our vigorous friends. We like their overflowing good nature. In fact, we admire the thing itself, more than the taste that leads to special exhibitions of it in funeral sermons.

In return for their sympathy and tears, we will merely suggest to them, that having just proved, as we hope to their satisfaction, that we are to survive the wreck of matter, and the crash of worlds, we will hold ourselves in a state of readiness, whether it comes sooner or later, if they will merely inform us, to announce *their* departure, and demean ourselves accordingly. H.

The *Cincinnati Lancet* for July contains some wholesome strictures upon the American republication of the *London Lancet.* Attention is appropriately called to various nostrums, the advertisement of which in its pages "read all the world like the advertisements of the various nostrums in the daily papers." The insidious and deceptive advertisement of the American Dispensary of John King, M. D., is also appropriately shown up. We like all that very well.

On the first page of the advertising sheet of the same number of our cotemporary, however, is a flaming and well-executed advertisement of the "Union Drug Store, a union of the Materia Medica of all Schools and all Parties, No. 110 Third street, Cincinnati."

We observe, too, that the first number of the *Cleveland Gazette* contains an advertisement of the same establishment, although it is much less glaring. We suppose our contemporaries, either know more of the house of Merrill & Co. than we do, or that, by an oversight, they have been deceived. Let the character of the house be what it may, we hope that the *Lancet's* advertisement will be omitted, or modified so as to comport with its very just strictures upon the advertising department of the *London Lancet.* H.

Several original communications now on file, were not on hand in time for this issue and will appear in our next. We are greatly obliged to these contributors, and hope to add to their number.

H.

In connection with and since our last issue, we have forwarded bills, and in some cases letters, to our delinquent subscribers. In doing so, quite probably we have made some mistakes, which, of course, will be gladly corrected when discovered. We are much gratified to state that the *Journal* has a fine list of subscribers, who are prompt in forwarding their dues, to all of whom we hereby tender our gratitude. But it has also a large delinquent list, a list including many excellent men who allow their arrearages to accumulate, to a greater or less extent, forgetful that it is by the payment of the mites due from individuals, that every such enterprise is sustained. We hope that all such will understand that we *want our dues*. Let it be borne in mind, furthermore, that our terms are $2 00 per annum, in advance, and remit accordingly. H.

We have received a single number of a new Medical Journal—*The Cleveland Medical Gazette*—under the proprietorship of our friend, Prof. Gustav C. E. Weber, Professor of Surgery in the Cleveland Medical College. It is a monthly of 32 pages,

Within a few months the suspension of a number of Journals has been announced, and piteous appeals for help have gone up from others. The courage that would lead a man, under such circumstances, to project a new one, is worthy of commendation. We shall be gratified to see this Journal enlist new laborers and succeed. The profession of Ohio has done entirely too little in the way of cultivating indiginous products. We have done much to sustain and give character to the men and literature of other States and cities to the neglect of our own, and we are gratified with every thing tending to interest and enlist the many men of learning and ability that we have among us. H.

Belmont Medical Journal.—This is the "organ" of the Belmont Medical Society. Just think of it. Belmont county not only sustains a Medical Society, but a Medical Journal also. This we consider decidedly plucky. It is a monthly of 16 pages, the fourteenth number of which is before us. Nor is this all. Belmont county gives *this* Journal a large subscription list, almost all of which are promptly paying subscribers. Belmont does but little by way of contribution to the wind work of the profession, but in a quiet way, is doing a good work, worthy not only of commendation, but of imitation. H.

The Abolition of Craniotomy from Obstetric Practice. By Dr. TYLER SMITH, Obstetric Physician to St. Mary's Hospital. ('Medical Times and Gaz.,' 12th Feb. 1859.)

In this paper the author shows that craniotomy is resorted to in British practice about once in every 340 labors. The whole number of births in England and and Wales exceed 600,000 per annum; and if we apply the proportion of 1 in 340 to these figures, we get a total of about 1800 cases of craniotomy per annum. This is as though every year all the children born in London during rather more than one week were sacrificed; or as though all the children produced during the year in such a county as Westmoreland were born dead. The mortality to the mother from this operation is nearly 1 in 5, in British practice, which would give in England and Wales a maternal mortality of betweon 300 and 400 per annum. Craniotomy is performed about twice as often in British as in French practice, and four times as often in this country as it is in Germany. It is an obvious fact that every improvement which has ever been made in obstetrics has tended to restrict and diminish the cases and conditions in which the performance of craniotomy has been resorted to. It is the author's object to show that, with the proper and scientific use of all the means at our command, it may be laid down as a general rule, that craniotomy should not be performed in the case of a living fœtus after the period of viability has been reached. It is certain that, up to the present time, the measures which are the alternatives of craniotomy have never been carried out in practice to their full and legitimate extent. Turning was the first great obstetric operation which checked the voluntary destruction of the fœtus during labor. The objections to turning which some obstepists entertain depend on an almost superstitious fear of the uterus —a fear mainly owing to ignorance of the nature of the organ, and of the laws under which it acts. The dread of introducing the hand into the uterus has prevailed almost universally. But, apart from the danger of infection, the hand of the accoucheur, properly guided, can do no more harm in the uterus than any portion of the fœtus of equal bulk. Restrictions of the most absurd kind have been laid upon the operation, and it has come to be almost limited to arm presentations and cases of placenta prævia. On the Continent, turning is the recognized practice in cases of difficulty, where the head is above the brim, beyond the reach of the forceps, when the os uteri

is in such a state as to admit the hand, and when no serious distortion of the pelvis exists. The operation of turning in cases of moderate pelvic deformity was practised by Denman, but it was dealt with rather as an exception than a rule of practice, until the matter was taken up by Professor Simpson. No unprejudiced person can read Dr. Simpson's papers on this subject without coming to the conclusion that turning may be performed in cases of moderate pelvic distortion at the full term, with comparative safety to the mother, and with a reasonable chance of safety to the child. It is also shown to be applicable to cases of greater deformity, in combination with the induction of premature delivery. Nothing has ever occurred in the history of turning which has so strongly tended to enlarge its usefulness as the introduction of anæsthesia in obstetric practice. Under chloroform we can turn with comparative ease in cases of excessive sensibility of the os uteri and vagina, in arm cases in which the waters have been long expelled, and the uterus has closed upon the fœtus with spasmodic force. It renders turning practicable in cases of convulsions or maniacal excitement, and in all instances it makes the uterus comparatively quiescent, and thus averts the dangers depending on contraction and resistance during the operation. Turning is performed nearly three times as often in France and Germany as it is in this country. After turning, the next great step in opposition to craniotomy was the discovery of the forceps. Before the time of Chamberlain, whenever turning was impracticable, there was no resource in cases of difficulty except in craniotomy. But it may fairly be questioned whether the whole powers of this instrument have ever been fairly brought out, especially in this, the country in which it was produced. If we examine our standard works, we find more pains taken to show when this instrument is not to be used than when it may be. The cases in which the forceps may be used are those of moderate disproportion or distortion, whether the arrest is at the brim, in the cavity, or at the outlet of the pelvis ; cases of arrest from failure of the labor pains, without any morbid condition of the parturient canal ; cases of convulsions in which the os uteri is dilated, and the head sufficiently low to be within reach of the instrument ; cases of occipito-posterior presentation, not otherwise admitting of rectification, and face presentations ; cases of accidental hemorrhage ; and cases of rupture of the uterus, in which no great recession of the head has taken place. It should

also be used at a comparatively early period in many of the cases which, if not assisted, run on to impaction from swelling of the fœtal head, and tumefaction of the soft parts of the mother. The outlet and middle straits of the pelvis are the limits within which the short forceps should be used; at the brim the long forceps is the proper instrument. The forceps is used more than twice as often in France and Germany as it is in this country. The last, and it may truly be said the greatest, opponent of craniotomy is the induction of premature labor. The largest single source of craniotomy is deformity of the pelvis. Now, it may be asserted, without the possibility of contradiction, that in this great mass of cases it would be right and practicable at once and forever to abolish craniotomy in the case of the living and viable fœtus. In all cases of known deformity, an examination should be made in the early or middle months of pregnancy, and the proper treatment of such cases should be the induction of abortion or of premature delivery. In cases of excessive distortion, where it would be altogether impossible for a viable fœtus to pass, abortion should be induced before the time of quickening. It would be quite impossible for intercourse and impregnation to take place in any case in which it would not also be possible to induce abortion with safety to the mother. In the very considerable number of cases of moderate distortion in which the diminished capacity impedes delivery at the full term, but would allow of the passage of a child at the seventh or eighth month, with the chance of living, the induction of premature labor is the only justifiable practice. Besides the great operations of turning, the forceps, and the induction of premature labor, there are other means by which, in special cases, the necessity of craniotomy may be superseded. One of the most simple is the rectification of occipito-posterior presentations. When the occiput descends towards the sacrum in the third and fourth positions, instead of turning towards the right or left acetabula, great difficulty is produced, particularly in first labors, or when the head is large. Recorded cases of craniotomy show that the want of this rectification, which is generally possible with the hand, the lever or the forceps, often leads to perforation. Cases of hydrocephalus in the fœtus are among the most difficult to deal with in an attempt to abolish craniotomy; but here we have the proposal of Dr. Simpson to tap the hydrocephalic head, and in this way reduce it so as to allow of delivery without the destruction of the fœtus. In actual occlusion or insuperable rigidity of the os uteri, incision is

a safer and better practice than craniotomy. While it is the object of the present paper to advocate the abolition of craniotomy in the case of the living and viable fœtus, there is undoubtedly a class of cases in which perforation may be practised beneficially—namely, in labors where the child has died during the course of parturition. No woman should be allowed to remain in difficult labor after the death of the child has been satisfactorily ascertained. Considering, then, the various means at our disposal in the way of preventing the necessity for craniotomy, the author unhesitatingly expresses his conviction that, as a rule of practice, craniotomy in the case of the living and viable fœtus should be abolished; and he believes that if all the resources of obstetrics in the way of prevention, management, and alternative treatment were properly wielded, the necessity for the operation would not arise.

Dilatation Treatment of Obstructions of the Nasal Duct.—The plan of slitting up the lachrymal canal in order to gain access to the sac and nasal duct, as first practised by Mr. Bowman, is now very frequently followed in the out-patients' room at Moorfields, and with most satisfactory results. Formerly, in order to allow of catheterisation of the nasal duct, an incision had to be made into the sac, and risk was run that a fistula might remain. Besides this, it was a painful and very troublesome procedure, very disfiguring to the patient as long as the fistula remained open, and of course always leaving a permanent scar. The new plan is exceedingly simple, and avoids all these inconveniences. The lachrymal duct having been freely slit up on its conjunctival aspect, the introduction of a probe of any desirable size into the sac is quite easy, and when there, by elevating the handle, the nasal canal is readily entered. The slit-up duct remains permanently open, but without either disfiguring or inconveniencing the patient, and the surgeon may repeat the use of the probe at intervals for as long as may be necessary. We have seen several very threatening cases of lachrymal abscess wholly cured after two or three dilatations, but in a general way so few do not suffice. The intervals allowed should be from four days to a week, and the probe used should on each occasion be allowed to remain in for half an hour or so. The principle of cure is precisely similar to that of strictures of the urethra by the bougie.—*Med. Times and Gazette, July* 19, 1858, *p.* 630.

Statistics of Tracheotomy.

The Statistics of the operations of tracheotomy performed during a number of years at the *Hôpital des Enfans* at Paris, where the effects can be observed upon an extended scale, must always be interesting and valuable. In former years we have frequently entered into practical details on the subject. We now quote from the *Journnl of Practical Medicine and Surgery* the following statistics relative to the operations of tracheotomy performed during the eight years just elapsed.

The following is the list of these operations from 1850 through 1857, with the number of cures obtained:

1850—20	operations	6	recoveries.
1851—31	"	12	"
1852—59	"	11	"
1853—61	"	7	"
1854—45	"	11	"
1855—48	"	10	"
1856—55	"	14	"
1857—71	"	15	"
Total, 390		86	

It will be seen by the above table, that the proportion of recoveries, although very unequal in the several years, presents a very similar general average; that is from 1 in 4 to 1 in 5 of the whole number operated on yearly. It should be mentioned that the majority of the children operated on were in the last stage of croup, and consequently in imminent danger of death.

M. Guersant, in whose wards this estimate was prepared, gives the following summary of the indications for end against tracheotomy, based upon the age of the children, the existing complications, &c.

Age is an important element to be considered. Amongst the cases which compose the above table, there is one of a child 18 months old who died with convulsions during the tracheotomy. M. Chaillon, the author of the article cited by us from the *Journal of Practical Medicine and Surgery*, states that he saw on the 7th of January last, a little girl of two and a half years die during the operation, notwithstanding the well-known skill of the surgeon. He had also seen a similar case in private practice—the patient being also a girl less than three years old.

Nevertheless, whilst the peculiar difficulties of tracheotomy in subjects under the age of two years are admitted—difficulties ascribable to the restricted relations and volume of the parts at that age ; to the dangers of a minute, long and delicate dissection ; and especially to the small size and mobility of the trachea, which often allow of the insertion of the tube only with extreme difficulty —M. Guersant does not consider the youth of the patient an absolute contra-indication to tracheotomy.

The same is true as regards pneumonia, when it complicates pseudo-membranous croup. For a long time, says M. Chaillon, the existence of this complication was thought sufficient wholy to contra-indicate tracheotomy. At present, M. Guersant adopts the opposite opinion ; and he has become convinced that, establishing respiration by an artificial track, he has favored the resolution of the pneumonia. He admits that one decided contra-indication to opening the trachea in croup—and that is, diphtheritic infection, or general diphtheritis. When a child whose vocal chords have been invaded by false membranes, exhibits at the same time similar morbid] products in the nose, the ears or upon the skin ; when there are attacks of epistaxis and every sign of extreme debility—tracheotomy will be useless ; the child will invariably die.

M. Guersant does not, moreover, consider the extremest degree of asphyxia an insurmountable obstacle to the success of the operation, provided the condition is permanent, and has continued for at least an hour with a persistent character.

Slow and continued asphyxia is indeed, the very state which is the chief indication for tracheotomy, according to M. Guersant. It is, then, the only thing to be done—the re-establishment of respiration being that alone which can keep the child alive.

There is a sort of asphyxia which does not so imperatively call for the operation—viz: the intermittent form. M. Guersant has seen children making violent efforts to breathe and seemingly about to die instantly ; false membrane having been discharged, the nature of the disease was certain. Nothwithstanding the friends having opposed the opperation deemed necessary by the surgeon, the usual means were employed—such as emetics, calomel, alum and chlorate of potash—and the patients have recovered. But with the exception of these rare instances and of the far more common cases of general diphteritis, M. Guersant thinks that as a general principle,

tracheotomy is distinctly indicated whenever there is continued and increasing embarrassment of the respiration.—*Gazette des Hopitaux*, and *Boston Med. and Surg. Journal.*

Inversion of the Body for the Relief of the Symptoms produced by the Passage of a Renal Calculus along the Ureter.—Professor Simpson exhibited at the meeting of the Medico-Chirurgical Society of Edinburgh, a small oblong renal calculus, from a patient who had passed them at different times, and always suffered terribly during their transit from the kidney to the bladder. This patient had been now twice relieved of the agonising symptoms accompanying the passage of the calculus by inversion of the body. Professor Simpson had subjected her to this treatment in consequence of his belief that the passing calculus, falling down into, and becoming impacted in the ureter, acted at its point of arrestment as a pea-valve, and by its accummulating the urine above, or in the pelvis of the kidney and higher portion of the ureter, led to the accompanying distress by the morbid distension of these portions of the urinary ducts. When the body was inverted, and the affected side manipulated, the calculus probably fell backwards, and consequently upward by its own gravity. At all events, whatever be the explanation, the practice in this and in one other case had immediately relieved the patient. He had seen partial relief from changed position in one case also of gall-stones. Position was a more important therapeutical agent than was generally supposed, not only in medicine, but also in surgery and therapeutics.—*Edinburgh Medical Journal, July*, 1858, *p.* 76.

The British Medical Association.—The twenty-seventh annual meeting of the British Medical Association took place at Liverpool on the 27th, 28th, and 29th of July. The description of it as published in the London journals reads very much like the descriptions of the meetings of our own American Medical Association. We notice, however, this marked difference. Instead of Reports from Standing Committees and National Reports on Health, often read by title merely, or at most a short abstract of them given, and

then referred to the Committee on Publications, as with us, the meeting of the British Association was more like a meeting of one of our State Medical Associations. Voluntary reports of cases, either written or oral, were made, and discussed in open meeting. There were a few committees on special subjects, whose reports were read before being referred. The association censured the Edinburgh College of Physicians for certain irregularities in granting their license to a homœophathist, and a resolution was offered, but subsequently withdrawn, censuring the same college for offering their license in consideration of "a money payment," to any one having any Medical or Surgical practice whatsoever.

The members breakfasted, dined and "lunched" together, and were entertained by the Mayor, after the most approved American style, though we see no mention made of reunions at the houses of resident members, in the evenings so pleasant a part of the meetings of our own Association. There was also an excursion "up and down the river in the Jackal." We hardly expected to find so much similarity in the proceedings of these two august bodies.

The next meeting was appointed to be held at Torquay, and Dr. Radclyffe Hall was elected president. At the meeting in Liverpool, about two hundred members were present, while only about one hundred members sat down to the Mayor's breakfast. Such an occasion with us, usually calls out the full strength of the convention!

We are sorry to learn that the Association is kept in perpetual difficulty by the expenditure on the *Journal*, (its "Transactions.") The Association is in debt to the unpleasant tune of $10,000, and the inability to discharge this debt prevents its "incurring any expense in scientific inquiries, or in the publication of such volumes of transactions as might be looked for from so numerous and intelligent a body of workers."—*Phila. Reporter.*

CONCAVE KNIVES IN FLAP OPERATIONS.—Geo. Allerton, Esq., M. R. C. S., makes a good suggestion to the *Lancet* of July 23d, in regard to the form of the knife to be used in flap operations, especially in cases where the limb is very fleshy, or where the cellular tissue is much infiltrated. In such cases the flaps are often so bulging and bulky as to prevent a nice adaptation of their surfaces, and suppuration and sloughing occur, which not unfrequently terminate in death.

Two operations have been proposed to meet this difficulty, viz: that of Mr. Luke, who recommends making the under flap first, and that of Mr. Erichsen, of making skin flaps with the circular incision of the muscles. Mr. Atherton thinks, however, that both practices may be avoided by the use of the concave knife:

"The proper curve to give to such a knife must be determined by experience, but I should think that a curve having a radius of thirteen or fourteen inches would suffice, the blade being in other respects like the ordinary double edged flap knife, with a blade about ten inches long in the cutting part. The handle and the blade should take the same sweep, the curve, of course, being on the flat surface. To use such a knife, it would be necessary to transfix the limb, taking a good sweep round the bone. The point once fairly through, thrust it onward and forward from point to heel, keeping its convexity well down in the muscles; then draw it back from heel to point in a corresponding direction, and finish the flap by cutting out. The best mode of using such a knife would, however, soon suggest itself to practical men, and I think its advantages would be great in some cases."

Dust Floating in the Air.—M. Pouchet finds that the dust floating in the air contains the detritus of the mineral constituents of the globe, atoms of animals and plants, and the finest debris of all the matters we make use of. But one item he especially points out, viz, *wheat starch,* which is invariably found in the dust whether old or recent. Surprised at the quantity of it present among the ærial corpuscles, M. Pouchet investigated the dust of all ages and of every locality, and everywhere he found this wheat starch presented. "I have found the starch in the most inaccessible corners of old Gothic churches, mixed with dust blackened by six or eight centuries of existence. I have found it in the palaces and caves of the Thebiad, where it may have dated from the time of the Pharaohs? I have found it in the tympanic cavity of the tympanum of a mummified dog, which I had found in a subterranean temple of Upper Egypt. In all countries, in a word, where wheat forms the staple of food, starch always penetrates into the dust, and is met with in greater or less quantities. Hence therefore, the *corpuscles* of which we have heard so much, are granules of starch and silica.

Twice only in a thousand experiments has M. Pouchet observed the large ova of infusoria in the atmospheric dust.

THE DIFFERENTIAL DIAGNOSIS OF OVARIAN DROPSY AND ASCITES.—No fewer than four cases have recently come under our notice in which patients suffering from ovarian dropsy had been subjected to prolonged diuretic and mercurial medication, in the belief that the disease was hepatic ascites. In one case, a short time ago, in a large metropolitan hospital, the reverse mistake was made, and the peritoneal cavity injected with iodine, in the hope of obliterating an ovarian cyst, which, as the autopsy a few days afterwards proved, did not exist. Rumor states that one or two other accidents of the same kind have occurred since the iodine injection plan came into vogue, but we are not in a position to substantiate them. Facts like these prove that the differential diagnosis between these two affections is either not so generally understood as it ought to be, or else that it is a matter of extreme difficulty. Now, there is one sign which hitherto we have never found to fail, but which is, we believe, as compared with its value, but little known. In more than one work on the diseases of women we find no mention of this symptom, although in extreme cases it is the only one which is available. The sign referred to is percussion of the lumbo-lateral region. If in a case of ascites in which the distension is so great that the hydrostatic line of level in front is not changed by posture—and it must be remembered that only in ovarian cases in which the cyst is so large as to simulate this extreme condition ought any difficulty to occur—if, in such a case, the patient be made to sit up in bed, and the loins be percussed, it will be found that the note is the same (usually dull) on both sides. If an ovarian case, no matter how great the distension, be treated in the same way, one loin will be found to be clear, and the other quite dull. The explanation is obvious; in ascites, the air-containing coils of gut float as far forwards as their mesenteric attachment will permit, while in the case of an ovarian cyst, they are pushed over to the healthy side. It is not easy to conceive any condition of things, excepting entire exclusion of air from the whole tract of intestines, which could diminish the trustworthiness of this symptom. It indicates also, with unfailing accuracy, on which side the ovarian cyst, if it exist, has originated.—*Med. Times and Gazette, June* 5, 1858, *p.* 574.

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PART FIRST.

ORIGINAL COMMUNICATIONS.

Ovariotomy in Ohio: being the report of a Special Committee of the Ohio State Medical Society: by J. W. HAMILTON, *Special Committee on Surgery; Prof. of Surgery in Starling Medical College. Revised and re-arranged for the O. Med. and Surg. Journal.*

To the Society:—Within the last eight months, the Chairman, who is the sole member of your Special Committee on Surgery, has had occasion to investigate twelve cases of ovarian disease. Four of these were subjected to Gastrotomy, and in one other, the question of operation is now pending. An incident of this succession of cases, has been the rigid scrutiny of the facts and statistics of the subject. These statistics were resorted to in the outset, with the ordinary degree of confidence in their correctness. The abundance of the fallacies discovered in them, however, was such as to fix attention upon Ovariotomy in our State, as the exclusive subject of this report.

On investigating the former records of this Society, what aimed to be a full statistical history of the operation up to June, 1851, by the zealous and intrepid Ovariotomist, the late lamented Dr. P. J. Buckner, was found. This table gave eleven cases: six successful, and five unsuccessful. But little progress was made in the investigation of the subject, till three cases were discovered, belonging to

Ohio, and occurring previous to the date of that report, all of which were fatal, and not included in it. One was that of Dr. Ephraim McDowell, on Mrs. Delano, of Chillicothe, in 1825; another was that of Dr. P. M. Crume, in 1848; and the third was that of Dr. Robert Thompson, occurring in 1847. These, added to those collected by Dr. Buckner, give fourteen cases as the aggregate at the date of his report, *eight* of which, instead of *five*, were fatal; making a change sufficient to give an essentially new aspect to the practical features of the subject, so far as this report is concerned.

Again: the periodical literature of our own and other States, contains at this date (June, 1859,) as contributed by Ohio, twenty-seven cases, *eighteen* successful, and *nine* unsuccessful. This is believed to represent all of the successful cases that have occurred, except a single one, that of Prof. Ackley, in 1856; while a large number that were unsuccessful are known not to have been reported. The whole does not contain an isolated unsuccessful case by a given operator. It does contain successful ones which transpired in the hands of several different operators, who subsequently had unsuccessful ones, which the record does not show.

Similar, though less glaring defects, were observed in the history of Ovariotomy in Kentucky, is given by Prof. Gross, in his history of Kentucky Surgery.

These things are mentioned, not as illustrating peculiar shortcomings on the part of our own surgeons, or those of Kentucky; nor for the purpose of maintaining that there is any thing unique in regard to this particular surgical topic; but as showing the sources of vitiation to our statistical information, on this and kindred subjects; and as pointing the society to the appropriate work of correcting these defects, as far as possible, within the sphere of its own operations.

The contemplation of the subject, accordingly, led to distrust, not only of our own contribution to it, but also of our general statistical information, of which it constitutes a part, and, probably, about a fair specimen.

What should be done in such circumstances? I had had a limited experience, which during the greater part of the time occupied in the preparation of this report, was supposed to have been sufficiently bitter and unsatisfactory. The circumstances which gave spaciousness and deceptiveness to the contribution made to the general subject in Ohio, are ubiquitously operative, being founded in human

nature; and hence the study of it affords no satisfactory indication as to the line of duty. Under such circumstances, what course should be pursued? Should that which has yielded such bitter experience be quietly abandoned? Or, in subserviency to the interests of humanity, should it be heralded—held up as a beacon to shield others from similar disaster?

To pursue the former course, is undoubtedly consonant with the dictates of human nature; to pursue the latter, is the imperative duty of the honest surgeon.

But another error was to be guarded against; that of being led estray, and the interests of humanity and science sacrificed, on the ground of an insufficient experience.

These were the circumstances and considerations, and these the feelings, in which the collection of the materials for this report originated. It was made with the determination, and for the simple purpose of ascertaining the *whole truth,* so far as Ohio and Ohio Surgeons are concerned, without bias for or against Ovariotomy, or any other course of surgical procedure. The result of this labor, sufficiently arduous, and in some particulars, far from being agreeable, is now presented to the Society; and though the barrenness of the details, in many of the cases, cannot but be occasion for the expression of deep regret; and though there may be deception as to the completeness of the following list, yet, I cannot refrain from the expression of a great degree of gratification, in being able to present the Society, the profession, and especially those surgeons who expect to assume the terrific responsibilities of Ovariotomy, a record containing all, or about all, whether fatal or successful, that has transpired in the hands of our surgeons, or within the limits of our State, which has been so prolific in this description of surgical experience.

The report embraces Ovariotomy in Ohio, whether performed by surgeons of our own, or adjoining States. It also embraces cases operated on by Ohio surgeons in adjoining States. It is aimed to include, in the list, all the cases in which the operation was merely commenced, as well as those in which the extirpation was completed. Every essential fact that could be procured, whether in reference to the previously published, or the unpublished cases is given. Merely speculative views are ignored. They can never settle the question of the admissibility of Ovariotomy as a standard operation. The time is past when a mere characterization of it as "belly ripping," will either be offered or received as final. It is too late to settle the

whole question, and satisfy the professional mind, by merely pointing to an assumed intolerance of injury, inherent in the peritoneum. The careful collection and scrutiny of *facts* is demanded—facts representing *failures*, as well as successes. The preponderance of these, whether for or against radical procedures, must settle the whole question.

It is to be supposed the Society will readily appreciate the propriety of undertaking, in its own jurisdiction, to make the collection complete. Whenever the profession can feel assured that we have made thorough work; that failures are as faithfully, if not as fully recorded, as successes; and that we have brought all of either that has transpired to the light; we will have done a most important part of the work of settling this great surgical question. Such a work is the great demand—the *sine qua non*—of the subject. Our State is now admirably adapted to it. It has probably been the scene of more Ovariotomy, in proportion to its population, than any other portion of the world. With its net-work of railroads and telegraphs, and its newspaper publications, itemizing every matter of interest, and flying through it like the leaves of autumn; with its five regular and two or three irregular medical publications; its four regular and three irregular medical colleges, and the emulation and rivalry growing out of all—these, and other circumstances, in their isolated and combined results, make our State peculiarly invitive of such labor, and especially promising of success in its accomplishment.

The sources of the material are sufficiently indicated in the course of the report.

As the most simple and convenient method, the cases are placed in connection with the names of the operators, arranged alphabetically.

HISTORY.

The honor of performing the first operation belonging to Ohio, is denied her own surgeons, and belongs to the illustrious Dr. Ephraim McDowell,* formerly of Danville, Kentucky, the great inventor and pioneer of Ovariotomy. The case was that of Mrs. Delano, of Chillicothe; the first daughter of Ohio to assume its terrific hazards, and whose heroism, it is much to be regretted, was not rewarded by success. It is not quite certain whether the operation was per-

* Gross' History of Kentucky Surgery.

formed at her residence, or that of her surgeon. Mrs. Delano visited Danville, for the purpose of consulting Dr. McDowell, about the last of October, 1826. Prof. Drake visited her, and took notes of her case, on the 11th of March, 1827, about four months and a half after the operation. It is inferred that Dr. McDowell operated at Danville, that she returned to her residence afterward, and that Prof. Drake visited her there. This was the last case in which Ovariotomy was undertaken by the great Kentuckian, and supposed to be the only case of ovarian disease, belonging to Ohio, ever operated on, except by her own surgeons.

The next case, belonging in any wise to Ohio, was that of Prof. Mussey, in July, 1828; though the patient did not belong to the commonwealth; nor did the operator till ten years subsequently. It, accordingly, only belongs to the State, from having been performed by one, who, during the greater part of a long professional career, was an Ohio surgeon. The date of Prof. M.'s second case has not been ascertained, though quite probably it was the first upon our own soil, by one of our own surgeons.

Dr. J. D. Bowles, of Harrison, Hamilton county, was the first to succeed, both in the extirpation, and in curing his patient. This was Aug. 5, 1844. Dr. P. J. Buckner next operated successfully on Mrs. Lawrence, April 14, 1848. Between this time and June, 1851, Drs. Buckner, Dunlap, and Farrell each operated twice; and Drs. Mussey, Crume, and Thompson, once.

The very brilliant and successful operations of Dr. Buckner were presented to the Ohio State Medical Society, in 1850 and 1851, in connection with a most zealous and enthusiastic advocacy of the practice. Since that time, and no doubt, in a great degree, as the result of the impetus thus given it, the operation has been performed by 16 different surgeons, in 36 cases. From first to last, it has been undertaken by 22 different surgeons, 17 of whom accomplished extirpations. Eleven surgeons have operated only a single time each.

CASES.

Case 1.—Ackley, Prof. H. A.,* recently deceased, formerly Professor of Surgery in Cleveland Medical College. This operation was performed two or three years since. A free incision was made through the abdominal parietes, and the tumor thus exposed. At this juncture, the lady being seized with a fit of coughing, the tumor was thrust from the abdomen, so as merely to hang by a pedicle of

* Letters from Prof. Delamater.

the size of a finger. This being ligated, the mass was separated by dividing it. The wound was dressed for adhesion, which occurred without an unpleasant incident. The tumor was cystic.

Case 2.—ACKLEY.* In 1855, Prof. A. operated in a case of "ovarian dropsy," which, at the time, gave fine promise of success. The patient was considerably shocked by the operation, but on the next day had rallied. A promising state of things continued for about three days, when she sank suddenly, and expired, on account of the supervention of abdominal hemorrhage. It was the opinion of Prof. Ackley, and also of Prof. Delamater, that this fatal hemorrhage was the result of undue traction, and consequent premature separation of the pedicle, incident to an effort to secure the stump external to the peritoneal cavity, by the use of the ligature on the pedicle.†

Case 3.—Anonymous.‡ Given without the name of the operator by agreement. He is one of the most industrious and worthy surgeons of the State.

Mrs. ——— came into the hands of the operator, suffering from dropsical distension of the abdomen. After paracentesis, a tumor, to the right of, and below the umbilicus, was observed. Several able physicians, in consultation, diagnosed ovarian disease.

When the abdomen again became distended, the operation for extirpation was commenced, with a free incision in the linea alba. A large quantity of fluid escaped, revealing the presence of scirrhus of the omentum. As there were extensive adhesions to the intestines, the operation was abandoned. The patient died within about a week.

Case 4.—BLACKMAN, GEORGE C.,§ Prof. of Surgery in the Ohio Medical College. This operation was performed, it is inferred, in February, 1856. The report is in Prof. B.'s own terms.

"This woman had been tapped several times, and for the last time, five days before the operation; during which time the tumor had regained its usual dimensions. On its removal, it weighed about twenty-two pounds. The adhesions were few, and easily broken up. The pedicle was left in the cavity of the peritoneum, attached to the ligatures without." Prof. B. never saw a wound, even of the extremities, heal more kindly: no bad symptoms followed, not even

* Letters from Prof. Delamater.

† It is possible that Prof. A. had additional cases, but if he had, I have not been able to get the clue to them.—H.

‡ Letter from the operator.

§ *Cincinnati Lancet*, March, 1856.

nausea, from which she always suffered after tapping. More than three years after the operation, the patient was in fine health."*

Case 5.—Blackman.* Prof. B.'s second case was at Lynchburg, O., some six months subsequently to the above. The tumor was solid, and weighed about twenty pounds. The adhesions were slight, but the patient being greatly emaciated, sank, exhausted, some forty-eight hours after the operation.

Case 6.—Blackman.* In this case, Prof. B. made a short exploratory incision, in a case of abdominal tumor, supposed to be ovarian; but finding very strong adhesions, at once abandoned the operation. The patient died a few days subsequently, but not, as he supposes, from the operation. The autopsy revealed the presence of a tumor, composed of both uterus and ovaries, in which a portion of the small intestines was completely imbedded; so that any attempt to withdraw it from the abdomen, would inevitably have ruptured them.

Case 7.—Blackman.* This case occurred only a few weeks since. The patient had been tapped some eight or ten times. Extensive adhesions were encountered. The tumor was unilocular, and weighed about twenty pounds. Notwithstanding the most liberal use of opium, peritonitis supervened, and the patient died, at the end of sixty-one hours.

Case 8.—Bowles, J. D.,† of Harrison, Hamilton county. The patient was Mrs. Brant, æt. 25. The operation was performed Aug. 5th, 1844. A year previously, a small tumor appeared in the left illiac region, which grew steadily. At the time of the operation, it occupied the whole of the lower part of the abdomen, extending upwards to a point midway to the umbilicus and ensiform cartilage. Its surface was hard and uneven. It could be moved freely, in a lateral direction, and somewhat in a vertical direction. The vagina and os uteri were healthy; the former inclining to the left. The tumor could be felt through it. She complained of pains in the loins and thighs, at times resembling parturition. In most respects the various functions of the body were performed in a healthy manner. She was the mother of four children.

The preparation of the patient, position, etc., were as usual. The incision was in the linea alba, and nine inches in length. The omentum was in front of the tumor, which was adherent to it, as well as to the uterus and bladder. The pedicle was "about two inches

* Letters from Prof. B. † *Western Lancet*, 1844.

wide;" its blood vessels being large and distended. It was transfixed by a double ligature, and tied in two parts. Not a jet of arterial blood was seen.

On the thirteenth day Mrs. B.'s health was better than before the operation.

The attachment was to the right broad ligament, instead of the left, as was expected from the history of the case.

The tumor was solid, and weighed five pounds. It was evidently fibrous.

Case 9.—Buckner, P. J.,* deceased, of Georgetown, O. This operation was performed April 14, 1848. The patient was Mrs. Lawrence, aged 32, of Winchester, Adams county; the mother of six children. The tumor commenced six years previously, low down in the left illiac region. When first observed, it was about the size of a goose's egg, and slightly movable. In a few months it seemed to occupy the right side. About a year and a half after it first presented itself, she was delivered of her fifth child. She lost sight of the tumor at the sixth month, which at delivery seemed to have returned to its original size. Two and a half years subsequently, she was delivered of her sixth and last child, which left the abdomen as prominent as at the sixth month. In the absence of pregnancy and lactation, she menstruated regularly.

The abdomen, at the time of the operation, was as prominent as at the full period of utero-gestation; having a sulcus running from the epigastric to the illiac region. The left side was prominent, soft and elastic, fluctuating distinctly. The right side was hard and firm, but elastic. The os uteri was healthy, and within an inch and a half of the os externum. The bowels were evacuated, and the diet reduced, for some days, preparatory to the operation.

The incision was in the linea alba, and extended from the umbilicus to the pubic symphysis. Eighteen pints of imperfect pus were discharged. The parietes of the sac were firmly united to the abdomen from one semilunar line to the other, and from a point three inches above the umbilicus, to within an inch of the pubes. It was impossible to distinguish the line of adhesions, so that, after emptying the sac, a fold of its posterior wall was pinched up, and found not to be adherent to the parts beyond. This was drawn out, and divided with a knife, so that the hand passing through it, might thus

* *Ohio Med. and Surg. Journal* for Jan., 1849. Also *Western Lancet for* 1848. Also Proceedings of O. S. Med. Society for 1851.

reach the lateral adhesions. The left side being thus freed from attachments, the walls of the abdomen collapsed, leaving the right side as prominent as ever.

Here was another mass, containing a similar fluid, filling the entire right side, and dipping down into the pelvis. This consisted of two cysts, the larger of which was punctured, discharging six pints of fluid similar to that already evacuated. The superior surface of the cyst was adherent to the omentum and walls of the abdomen, from the umbilical, to the right hypochondriac region. This was the most firm and difficult point to overcome in the operation. In effecting it the omentum was lacerated, and bled so as to require a ligature. To facilitate this stage of the operation, the incision was extended, so as to make the entire wound eleven inches. The pedicle arose from the broad ligament, embracing the fallopian tube and ovary, and was two inches in diameter. It was transfixed, and tied in two lateral halves. The wound was dressed as usual, with only five interrupted sutures, however. The operation occupied an hour and a quarter. The cyst weighed twenty-eight and a half pounds; the solid portion amounting to four and a half pounds.

On the thirty-fourth day, the last ligature came away. On the first of June, the patient was walking about, her health and strength improving daily.

After the lapse of more than two years, this lady was in good health, and menstruated regularly.*

Case 10.—Buckner.† This operation was performed June 31, 1850. The patient was Mrs. Carter, of Cincinnati, aged 39 years, the mother of several children. A round tumor was felt through the walls of the abdomen, elastic and movable, with but little sensibility.

The abdomen was divided in the linea alba, to the extent of eight inches. The tumor presented numerous adhesions, which were divided with the knife. The pedicle was about an inch in diameter, and arose from the right ovary and broad ligament. It was secured by a single ligature. About the time of closing the wound, from efforts to vomit, the bowels protruded, and were returned with difficulty. The dressings were as usual, The wound healed kindly, although the general symptoms, at times, were alarming. Thirty-

* Proceedings of Ohio State Med. Society for 1850.

† Proceedings Ohio State Society for 1850; also, *Ohio Med. and Surg. Journrl* for 1849, and for Jan., 1850.

nine days after the operation, the ligature was removed, and the patient was able to walk about the room. Mrs. Carter is still living in Cincinnati, in the enjoyment of perfect health.*

Case 11.—Buckner.† This patient was Mrs. W., of Augusta, Kentucky. The operation was performed June 15, 1848.

Two distinct, solid tumors could be felt through the walls of the abdomen; one freely movable in the umbilical region; the other firmly fixed in the hypogastric and illiac regions. The vagina was much shortened; the cervix greatly elongated; the os resting behind the symphysis pubis. The tumor was distinctly felt through the walls of the rectum, being solid and irregular: it was firmly packed down into the pelvis, from which it could not be moved.

On making a long incision in the linea alba, the superior tumor and bowels immediately protruded. Its pedicle was of the size of the thumb, and attached to the lower one. It was ligated, and the tumor removed. The lower tumor was lifted out of the pelvis with difficulty, though no adhesions existed. Its pedicle was very large, arising from the left broad ligament. The left ovary being apparently in a diseased state, it was deemed best to remove it. The pedicle was ligated in four equal parts. Dressings as usual. The patient died of peritonitis on the sixth day. The tumors were fibrous.

Case 12.—Buckner ‡ The patient, Mrs. Tegarden, of Fairfield county, was the mother of nine children. The tumor was of two years' growth, commencing after the eighth confinement. During the latter part of her ninth pregnancy, Mrs. T. suffered very much from colic. The operation was performed October 4, 1851. The incision, nine inches in length, was in the linea alba. On exposing the tumor, it was found not to be omental, but mesenteric; being bound to the posterior aspect of the abdomen by little more than a reflection of peritoneum. On the anterior aspect of the mass, the small intestine was intimately adherent for twelve inches. This being separated, it was found necessary to ligate several vessels. On the ninth day, the wound having already united, was again opened in the lower part, and about two pints of fetid, decomposed blood were removed. The patient recovered within seven weeks. We learn from Dr. Geo. E. Eels, who knows her well, that this lady is still living.§

* Recent letter from Dr. Taliafero.

† Procedings of Ohio State Medical Society for 1851.

‡ *American Journal Medical Sciences*, 1852.

§ Dr. Taliafero has the impression that Dr. P. J. Buckner performed an operation in Butler county. I can get no clue to it owing to the death of the operator. H.

Case 13.—Buckner, William,* deceased. This gentleman operated a single time. The patient was a young lady aged about twenty. The tumor was fibrous. The patient died of hemorrhage on the third day.

Case 14.—Chamberlain, E. K. A considerable degree of perseverance in making inquiry, has not resulted in even the slightest success, in obtaining particulars, in reference to this case. It was never published. It is given in Atlee's tables, on the authority of a letter from Dr. Chamberlain himself. It is believed that Dr. C. resided in Cincinnati, though even this, is not quite certain. Buckner's report, Atlee's tables, and Lyman's monograph, all attribute the case to Ohio. The patient died on the table.

Case 15.—Crume, P. M.,† Prof. of Obstetrics in the Cincinnati College of Medicine. This operation was performed in 1848. The patient, Mrs. Evans, of Preble county, was married at about the age of nineteen years. In the course of a year, she supposed that she was about being confined, but after severe suffering, continuing two weeks, what had appeared to be parturient efforts subsided, to be renewed again at the end of about a year. These annual attacks continued for nine years, greatly impairing her general health. A short time prior to the tenth annual recurrence, the patient being thirty years old, Prof. Crume was induced to undertake the extirpation of that which was supposed to be an ovarian tumor. It proved to be an "irregular tumor, weighing nine and one-half pounds, evidently the result of a tubular conception. The patient died on the third day, probably in consequence of the low temperature of the room during the operation, inflammation having set in at an early period after the first dressing."

Case 16.—Dorsey, G. V.,‡ of Piqua, Miami county.

The patient was Miss C., of Miami county, aged thirty years. The operation was performed April 7, 1858: patient had suffered from dyspepsia and deranged menstruation for more than two years. Four months previously, the doctor recognized a considerable enlargement of the left ovarium. A careful use of iodine was resorted to. This, in various preparations, was kept up for several months, without any obvious benefit. The tumor continued to grow, and finally became so large as to fill the whole left side of the abdomen, forcing out the parietes in every direction, and impeding respiration,

* Letter from Dr. Taliafero. † Recent letter from Prof. Crume.

‡ Letter from Dr. Dorsey.

by preventing the descent of the diaphragm. Under these circumstances he proceeded to its removal, the patient being anesthetized, and in the ordinary position,

An incision about eight inches in length was made in the linea alba, and this met by a transverse incision, extending on the left side, to the distance of six inches. The abdomen, being fully open, revealed, at once, the extent, annd numerous adhesions of the tumor. It occupied the whole of the left side of the abdomen, forcing the intestines in the opposite direction, to which, with the spleen, omentum, and abdominal parietes, it was strongly adherent. It was penetrated in every direction with large blood vessels. Those of the neighboring parts, especially of the mesentery, were exceedingly large, many of those of the latter part being of the size of the little finger. The greater part of the adhesions were separated with the hand ; in one or two places, however, arteries were divided with the knife, and carefully secured. I conclude the report in Dr. Dorsey's own language :

" Having, after nearly an hour's work, arrived at the root of the tumor, nothing like a pedicle was found, but only a broad adhesion of a diseased mass, occupying the place of the left ovarium, to the adjoining parts. It was found that the only possible means of removing the immense tumor was to introduce a strong, double ligature into a portion as close as possible to the healthy parts, and tie in each direction, so as to encircle the whole attachment. This being done, the wound was carefully cleansed, and closed with stitches and adhesive straps. A large amount of fluid escaped from the tumor during its removal, and the solid portion, which remained, weighed nearly seven pounds. It was remarked, that although so great an amount of substance had been removed, still the abdomen remained greatly enlarged ; this seemed to arise from the distended state of the intestines, and the enlarged and thickened state of the mesentery.

" The patient recovered from the effects of the chloroform, and for two hours seemed pretty comfortable, complaining only of intense burning in the abdomen. Shortly after this, however, she became restless ; insisted on being turned ; had fainting attacks, catching of the breath, irregular respiration ; and finally died about four and a half hours after the termination of the operation."

Case 17.—Dunlap, A., of Springfield, formerly of Ripley. This case was refused publication by a western medical journal ; it was accordingly never published, but referred to incidentally, in the American Journal of the Medical Sciences, for Oct., 1854. The

patient was Mrs. R., of Ross county. The tumor was multilocular, and weighed forty-five pounds. "The patient died on the seventeenth day after the operation of diabetes." The wound healed mainly by the first intention. No post mortem was made.

Case 18.—DUNLAP.* The patient was Mrs. Hopkins, of Brown county, aged thirty-five years. Had given birth to six children, the last three years previously. Operation performed June 10, 1850. Menses ceased four months previously: abdomen as large as at six or seven months' pregnancy: had pain in the back, soreness through the lower part of the abdomen, and uterine hemorrhage. Incision in linea alba, eleven inches in length. One gallon of thick opaque fluid was drawn off. Adhesions were extensive, but not firm, and were readily separated by the fingers. Size of pedicle not noted. It was ligated in two equal halves, by a double ligature. Wound closed by five interrupted sutures, with strips of adhesive plaster intervening. Great prostration followed, from which there was complete re-action within two days. On the sixteenth day, there was free discharge from the vagina, which dispersed a considerable tumor in the hypogastric region. About the same time, there was free discharge from the wound in the abdomen. The ligatures came away on the thirty-first and thirty-fourth days. In six weeks the patient was able to be on her feet. Mrs. H. has since given birth to two children.†

Case 19.—DUNLAP.‡ The patient, Mrs. B., of Bracken Co., Ky., aged thirty-seven years, the mother of five children, was tapped for ascites four times. After the second tapping, a tumor was discovered in the abdomen. The operation was performed March 24, 1853. At that time she was reduced in flesh, the abdomen enormously distended, with fluctuation in every part except the right illiac region. She was mostly confined to bed. The incision was near twelve inches in length. The adhesions were slight, and were readily broken up by the hand, except where tapping had been performed, where the knife was called into requisition. The pedicle was transfixed with a needle, armed with a double ligature, and each half ligated. Ordinary dressing.

On the thirteenth day the patient, with assistance, walked across the room. The ligatures came away on the twentieth day, at which time she was able to walk into the adjoining room without assistance. The tumor weighed thirty-seven pounds.

* *Western Lancet* for June, 1851. † Letter from Dr. Dunlap.

‡ *American Journal Medical Sciences* for Oct. 1854.

Case 20.—Dunlap.* The patient was Mrs. F., of Clermont county, aged 46 years. Had ceased to menstruate six years previously. Operation performed May 17, 1853. About three years previously, Mrs. F. discovered a tumor, about the size of her fist, floating in the lower part of the abdomen. This gradually enlarged, till it filled the cavity of the abdomen. Fluctuation was distinct in every part. She was greatly reduced in flesh, but her general health was good.

The incision was ten inches in length. The left ovary was removed. Dressing as usual. Bowels were moved on the third day, by medicine. A sanguineous discharge, resembling the menstrual, made its apperance on the third day. She was able to be up on the fourteenth day. Ligatures came away on the twenty-seventh day. The tumor, we infer, was multilocular, and weighed thirty-one pounds. The patient has since enjoyed uninterrupted health, and is more fleshy than ever before.

Case 21.—Dunlap.† This operation was performed in 1855, on Miss W., of Davenport, Iowa. The tumor was fibrous, and weighed thirty pounds. The patient died of hemorrhage.

Case 22.—Dunlap.† This operation was also performed in 1855. The patient was Mrs. Ramsey, of Winchester, Adams county. The tumor was a multilocular cyst, of sixty pounds weight. The patient recovered.

Case 23†—Dunlap. The patient was Miss M., of Harrison Co., Ky. The operation was performed in 1856. The tumor was multilocular, and weighed twenty-four pounds The patient recovered.

Case 24.—Dunlap.† This operation was also performed in 1856. The patient was Mrs. L., of Scioto county. Nine months previously, Dr. Kimball, of Lowell, Mass., made an opening, six inches in length, into the abdominal parietes, decided the operation to be impracticable, and abandoned it. Dr. D. removed a multilocular tumor of thirty-two pounds in weight, and the patient recovered.

Case 25.—Dunlap.† This case also occurred in 1856. The patient was Mrs. W., of Adams county. The tumor was a multilocular one, of thirty-three pounds. Recovered.

Case 26.—Dunlap.† This again occurred in 1856. The patient was Miss B., of Fayette county. The tumor was fibrous, and weighed one hundred and six pounds. The patient died ten days after the operation "from inanition."

* *Amer. Jour. Med. Sciences* for Oct., 1854. † Letter from Dr. Dunlap.

Case 27.—DUNLAP.* Patient was Mrs. R., of Chillicothe. The tumor was a simple cyst, weighing 136 pounds. Patient "died on the seventh day, from congestion of the brain."

Case 28.—DUNLAP.* This also occurred in 1856. Patient was Mrs. B., of Fort Wayne, Ia. The tumor was a multilocular one, of thirty-two pounds weight. Died in thirty-six hours, from "peritoneal inflammation."

One of the above cases, stated to have recovered, died "of disease of the lungs," but not until it "could be said to be free from the danger of the operation. Six of these cases are still living, and enjoying good health."*

Case 29.—FARRELL, JOHN,† of Warren, Trumbull county. The patient was Mrs. S., of Coitsville. The tumor originated in the left ovary, and occupied the whole of the abdominal cavity. The patient was tapped five times, at intervals of four or five weeks, losing about two gallons on each occasion. An incision was made in the linea alba, eight and a half inches in length. The tumor was found to be extensively adherent to the uterus, intestines, and abdominal parietes; so much so, that it was deemed expedient to abandon the operation. The wound was dressed with sutures and adhesive straps, and united by the first intention, except where a broad tent was introduced into an opening made into the sac. This was left for several months, and by it a discharge was maintained, to the time of her death. This occurred, in connection with an attack of acute pneumonia, about twenty-two months after the first tapping, and about a year, it is inferred, after the attempt at extirpation.

Case 30—FARRELL.† Dr. F.'s second case was that of Mrs. McCally, of Warren, Trumbull county, aged 28; the mother of five children. The operation was performed in August, 1850. The tumor was first observed four years previously. The incision was ten inches in length. The cyst was a compound one, involving the right ovary. The ligature came away on the thirty-second day. The patient recovered excellent health, after severe peritonitis, and a slow closure of the wound by granulation.

Mrs. M. menstruated regularly after the operation; but up to November, 1854, when she left Warren, she had not borne offspring.‡

* Letter from Dr. Dunlap. Dr D. was connected with Dr. Bradford, of Kentucky, in another successful case. It does not fall within the scope of the Report, because it was not in Ohio, and Dr. B. was the principal operator. He was "in partnership" with Dr. B., in four of the cases given.

† Proceedings of Ohio State Medical Society for 1851.

‡ Recent letter from Dr Julius Harman, who, with Dr. J. B. Harman, conducted the after treatment.

Case 31.—Fries, George,* of Cincinnati. The patient, Mrs. C., was 51 years of age; the mother of several children; menstruated regularly, and had always enjoyed tolerably good health.

Soon after her last confinement, eight years previously, she observed, in the right illiac region, a small tumor, which grew at a moderate rate till a year previously, when its growth became rapid, and it soon filled the cavity of the abdomen. She suffered but little, aside from mere distension. There had, at no time, been the ordinary signs of inflammatory action about the tumor. It was smooth, regularly protuberant, changing but little with the altered position of the patient. Abdomen fluctuated distinctly on percussion. In the dorsal decubitus there was dullness at the umbilicus, with resonance in the lumbar regions. The cyst being readily shifted from side to side, was believed to be free from adhesions.

Operation Oct. 30, 1856. There is no account of preliminaries. Incision three inches in length, low down, and in the linea alba. The tumor being exposed, was emptied of about thirty pounds of colorless fluid, when the sac was withdrawn, its pedicle ligated, and the wound dressed in the usual manner, except that a large darning needle was passed through the pedicle transversely, just interior to the ligature, and exterior to the wound. This was done for the purpose of producing adhesion between the pedicle and the edges of the incision, and preventing the escape of sloughs, etc., into the peritoneal cavity.

The after treatment consisted mainly in an appropriate regulation of the diet, and the administration of opium, of which the patient took 24 grs. on the first, 15 on the second, and 10 on the third day. On the fourth day, having had no evacuation of bowels, she was ordered Croton oil and turpentine in sufficient quantity to produce the desired effect.

The ligature came away on the fourteenth day. This lady resides in Cincinnati, and is in excellent health.†

Case 32.—Fries.‡ The name, age, etc., of patient are not given. We infer that the operation was performed about the 1st of May, 1856. Six weeks previously patient had given birth to a two and a half months' fœtus. The preparatory treatment consisted in the use of aperients and light diet. The incision was about ten inches in length. The peritoneum was found closely adherent to the walls of

* *Western Lancet* for December, 1856.

† Recent letter from Dr. Fries.

‡ *Western Lancet* for March, 1856.

the sac, and without being aware of it, both cavities were opened at once, allowing a large quantity of fluid to escape. The adhesions were found to be such, that it was thought best to evacuate the fluid and allow the sac to remain, and depend upon injections to prevent reäccumulation. The wound was accordingly closed. Six days afterward the tumor was found to be filling rapidly, and on the tenth, was nearly as large as before the operation. The next day the imperfect cicatrix opened, and a very fetid fluid escaped. Injections of nitrate of silver were now used for three or four days. This failing, various other fluids were injected without avail. Finally the attempt at extirpation was renewed, and crowned with success. The adhesions, extending over only about one-half of the surface, were easily detached. The pedicle was allowed to remain in the cavity of the peritoneum. The ligatures embracing it passed out through the lowest point of the incision. The diarrhœa continued, however, and the patient died on the seventh day after the removal of the tumor. The reporter expresses the opinion that he erred in not completing the operation at first.

Cases 33, 34, 35, 36.—Hamilton, J. W.,* Professor of Surgery in Starling Medical College; author of this report.

Case 37.—Holstein, J. G. F.,† then of Zanesville, now of the National Medical College. Patient was Miss Smitley, of Muskingum county, aged twenty-seven; tumor was of three years standing. Nothing but increased size of the abdomen, and weariness from carrying her burden, caused her to notice any deviation from health; the abdomen was tense, imparting fluctuation, like common dropsy. The fluid was evidently in a cyst within the abdomen, and could be lifted about in mass. The canal and cervix uteri were healthy. Simpson's sound passed to the depth of two and a half inches. Uterus was more movable to the right than to the left. Menstruation regular.

The usual preparation of the bowels, elevation of temperature of room, and position, were observed, and the operation performed in the ordinary manner, with an incision seven and a half inches in

* Cases 33 and 34 were reported in detail, in this Journal, for January, 1859. Cases 35 and 36 were reported in like manner in the last number. 34 died at the end of forty-two hours, from gangrenous inflammation of the tumor, the removal of which was not accomplished. 33, 35 and 36 are living, and in good health. Those who have not the means of referring to these cases may learn the leading facts, in regard to them, by a careful study of the Analysis and Summary.

† *Cincinnati Lancet* for December, 1855.

length, October 12, 1855. There were no adhesions. Cyst was drawn from the cavity of the abdomen by traction, upon a ligature which had previously been made to transfix its walls, assistants meanwhile exerting pressure upon the sides with sponges wrung out of warm water. The left ovary was implicated, the pedicle consisting of the broad ligament and fallopian tube, whose fimbriated extremity, as large as the hand, was spread over the tumor, apparently holding it in its grasp. A needle, armed with a double ligature, was passed twice through the pedicle, and tied firmly on each side. Not four ounces of blood were lost, and none of the viscera were exposed except the uterus. Dressing as usual.

We infer that the cyst was a simple one. The whole tumor weighed twenty-six pounds, of which the cyst was two and three-fourths pounds.

The cure progressed without serious symptoms. Bowels acted on the sixth day, in response to a dose of six com. cathartic pills. Patient commenced sitting up on the eighth day; ligature came away on the seventeenth. The only anodynes noted were teaspoonful doses of Cam. Tinc. of Opium. Patient left for her home, a distance of fifteen miles, Oct. 31, "in exuberant health and spirits." Dr. Dillon, of Putnam, states, in a letter just received, that Miss S. is in perfect health.

Case 38.—Howard, R. L.,* formerly Professor of Surgery in Starling Medical College. The patient was Miss Jones, aged seventeen, of Franklin county. Her health was very greatly impaired, and death was apparently near at hand. The tumor was a large oval mass, filling the cavity of the abdomen, and distending its walls. Obscure fluctuation revealed the presence of more or less fluid in the center of the tumor. The uterus, on examination per vaginam, seemed to be healthy. After two tappings, followed by rapid refilling, the tumor was extirpated. The incision was from a point three inches above the umbilicus, down the linea alba, to the pubes. The tumor was attached to the uterus somewhat, but was otherwise free. The peritoneum surrounding the pedicle was divided on a grooved director in the situation of the ligature, and the pedicle divided an inch from it. The patient recovered without an unpleasant symptom.

It is now more than seven years since this operation was performed. This woman has been married for several years, and is in perfect health, though in common with other married sisters, is childless.

* *Ohio Medical and Surgical Journal,* vol. 5.

Case 39.—HOWARD.* Prof. H.'s second case was that of Mrs. Matthews, of Franklin county. She was aged twenty-eight, and was the mother of four children. Previous to her last pregnancy, the tumor was large enough to fill and distend the cavity of the abdomen. During her term, however, she continued to enjoy good health, suffering only from distension. From the time of her last confinement, which was two years previously to the operation, the tumor grew rapidly. When first examined by Prof. H., in 1852, she was firmly convinced that she was six months pregnant, resting her opinion upon the fact that her catamenia had been absent for that length of time, and that she was sensible of the child's motion. On the first day of September, 1853, she was tapped, when nine gallons of fluid were discharged, which left a large solid growth in the abdominal cavity.

On the fourteenth of October, eight gallons of fluid were removed by tapping, and the operation proceeded with at once. The incision extended from near the umbilicus to the pubes. The tumor was found firmly adherent to the parietal peritoneum. The adhesions were broken up from four to six lines beyond the boundaries of the incision. Their character was such as to lead him to abandon the idea of an extirpation. He accordingly removed a portion of the cyst, and introduced a tent, made of lint, into its cavity, for the purpose of preventing closure. A low form of fever attacked the cyst and peritoneum, resulting in the death of the patient on the seventeenth day.

Case 40.—HOWARD.† Prof. Howard's third and last case was near Bellville, Richland county. I have not succeeded in procuring the details. From Dr. Sachse, of this city, who assisted him, it is learned that the adhesions were such as to lead to his abandoning the operation after it was commenced. The patient died at from two to seven days subsequently.

Case 41.—LITZENBERG,‡ of Hamilton county. Mrs. J. R, of Boone county, Ky., became his patient April 29, 1855. Tumor had been growing for two years; for the last six months, very rapidly; and, commencing in the right illiac region, it extended from that point upward, and to the left. It was now a large pelvo-abdominal tumor, greatly distending the abdominal parietes. The uterus could

* Letter from Dr. Beach—verbally from Dr. Sachse.

† *Ohio Medical and Surgical Journal*, vol. 5.

‡ *Western Lancet* for March, 1856.

be moved quite freely on the point of the finger. The outline of the tumor could be felt in the abdominal cavity, with a firm band dividing it into two nearly equal parts, giving the sensation of two distinct tumors. The whole presented distinct fluctuation.

Two tappings were made, securing the evacuation of fourteen and sixteen quarts, respectively, of albuminous fluid. These did not materially reduce the size of the abdomen, which, on the contrary, continued in a state of great tension. Emaciation was extreme, but her appetite continued good.

The operation was performed May 22d, after the usual preparation. The incision was in the linea alba, and eighteen inches in length. The mass was found adherent to the parietal peritoneum, omentum major, colon, small intestines, and illiac fossæ. These were separated by the hand. Pedicle, we infer, was attached to the right ovary, and was an inch in diameter. It was secured by a double ligature, and left long enough to reach the lower extremity of the external incision. From the point of its connection with the body of the tumor, it extended upward and to the left, constituting thus the firm band before spoken of as dividing the mass into two nearly equal parts. Dressing as usual. During the after-treatment, there was some suffering from flatus, which was relieved by the use of the rectum tube. Laxatives were administered on the seventh day, followed by free evacuations on the eleventh. The first ligature came away on the fourteenth, and the second on the nineteenth day. Patient left for her home in Kentucky, on the twenty-second day. Ten months after the operation, Dr. Litzenberg learned, through Dr. Sham, of Kentucky, that the patient was in better health than ever before.

The tumor was a multilocular cyst, which weighed more than forty pounds, after the tappings mentioned. The secondary cysts were seven in number, and contained about three gallons of fluid, one gallon of which appeared to be pus.

Case 42.—McArthur, T. W.,* of Wilmington, O. This operation was upon Miss S. M., on her sixteenth birthday. In April, 1857, she was of a size appropriate to the eighth month of pregnancy. At this time she had a violent attack of acute peritonitis, which seemed to be general. January 1, 1858, her sufferings had become very great, and her general health was failing.

The incision was six inches in length, and in the linea alba, com-

* *Western Lancet*, 1859.

mencing just above the umbilicus. Three sacs were tapped. The anterior and inferior portions of the tumor were readily separated by the hand. The lateral and superior surfaces were found so firmly adherent as to lead the operator to desist. The dressings were as usual. The patient was annoyed with vomiting for three days, but recovered from the effects of the operation, and three or four months afterward was in improved health.

Case 43.—McDowell, Ephraim,* of Danville, Ky. The leading facts of this case, as shown by notes taken by Dr. Drake, both before and after the operation, are as follows: the patient, Mrs. Delano, was of the age of 38; without offspring, though eight years married; had always menstruated regularly, and was never sick till five years previous to her death. About December, 1825, a hard tumor was discovered in the right illeo-hypogastric region, which steadily increased in size, till it occupied the whole abdominal cavity, from the pubic symphysis to a point above the umbilicus, reaching outwardly as far as the costal cartilages. It was hard, irregular, and slightly movable.

The description of the operation, with the subsequent memoranda of Dr. Drake, we give, as found in Prof. Gross' History of Kentucky Surgery.

"From the difficulty, or rather impracticability, of moving the tumor about, Dr. McDowell naturally concluded that it must be extensively adherent. Believing, however, that extirpation was not impossible, and the lady anxious to be relieved, an operation was determined upon. An incision was accordingly made in the usual manner in the linea alba, and the tumor exposed by separating the tumor and omentum, by which it was enveloped. The patient, at this stage of the operation, became so rapidly and excessively debilitated, that apprehensions were entertained for her immediate safety. The tumor, as had been previously conjectured, was found to be extensively and strongly adherent, and its extraction was pronounced impracticable. In about two weeks the wound was healed, without any material change in the general health.

"Dr. Drake visited Mrs. Delano on the 11th of March, 1827, about four months after the operation, and found her excessively emaciated, with swelling of the right leg, and all the symptoms of gradual exhaustion. The cicatrice, from the operation, existed in the linea alba, and was about two inches long. The whole abdomen

* Gross' History of Kentucky Surgery.

was excessively protuberant, from the pubic symphysis to the ensiform cartilage. The liver very hard and greatly enlarged, bulged out high between the short ribs and the umbilicus, over into the left side. Here, in contact with the ovarian tumor, in a kind of groove between them, the colon passed across, below the navel. At the center of the colon was a small, flattish tumor, which felt very hard, and could be moved along the bowel down into the sigmoid flexure. The ovarian tumor filled the right illiac region, and extended, in front, nearly to the umbilicus, crossing the linea alba, and being, seemingly, more prominent on the left than on the right side. It was fixed during respiration, aud appeared to be immovable. The liver, on the other hand, obeyed the motions of the diaphragm."

Her menses ceased about a month after the operation. Death occurred soon after Dr. Drake's visit. The body was not examined.

This is supposed to have been Dr. McDowell's tenth and last case, but the only one which he had in Ohio, of which I have been able to learn. The operation was performed about the first of January, 1827, about three years before Dr. McDowell's death, and seventeen years subsequent to his first operation.

Case 44.—Mussey, R. D.,* formerly Prof. of Surgery in the Ohio Medical College, but more recently Prof. of Surgery in the Miami Medical College, and now resident in Boston, Mass.

The patient was Mrs. Sly, aged 40 ; the mother of thirteen children. The incision was from the umbilicus to the pubes. On exposing the diseased mass, the transverse colon was found to cross in front of the tumor, and to be firmly adherent to it below the umbilicus. Such were the adhesions that the extirpation was abandoned. The cyst was tapped of four or five pints of turbid fluid, and a tent inserted. In a few days the discharge became purulent, and so continued for three weeks. The opening then closed, and at the end of a few weeks more, the patient had entirely recovered. At the end of a year, she gave birth to her fourteenth child, at which time there was no sign whatever of the return of the disease.

Case 45.—Mussey, R. D.† The patient, a resident of Georgetown, O., was aged about forty years, and was the mother of several children. At the time of the operation, she was as large as at the full term of utero-gestation. The abdomen was opened to the extent of three inches in the linea alba, and the sac emptied. Its edges

* *American Journal Medical Science,* 1827.

† Proceedings of Ohio State Medical Society, for 1851.

were then stitched to the margins of the external wound by interrupted sutures. This was kept open, and the secretions thus discharged by the use of a tent, for nearly a year. Under proper constitutional treatment, she recovered pretty good health. The tent, however, was finally dispensed with, the wound closed, the disease returned, and the patient died a little more than a year after the operation.

Case 46.—Mussey, R. D.† This operation was performed in 1850, the last one of the kind undertaken by Prof. Mussey.‡ The major incision was made, when the disease was found to be a tumor in the walls of the uterus. The extirpation was not completed. The patient died of exhaustion at the end of fourteen hours.

Case 47.—Mussey, W. H § This gentleman reports a case. The patient was Mrs. S , aged 56, the mother of six children. A year previously to the operation, a tumor appeared in the left illiac region, which moved with the varying position of the patient. At the time of the operation (Feb. 8, 1858,) the woman presented the appearance of a woman at the full term of utero-gestation. The patient was a confirmed dyspeptic, with pulse of 100, a scanty flow of urine, and constant pain in the abdomen and back.

The extreme left portion of the abdomen was firm and dull on percussion ; the region of the linea alba more elastic, while the right presented distinct fluctuation. The uterus was normal in size, while posterior and to the right, a tumor of the size of an egg was observable.

The incision was in the linea alba, and eighteen inches in length. The adhesions were slight. The tumor was freely incised, and thus reduced in size, so as to enable the operator to reach the pedicle, which proceeded from the left ovary. This consisted of a thin web, two inches in width. It was transfixed and ligated in two portions. A second cyst, of the capacity of two ounces, was found attached to the right ovary. A ligature was applied and the cyst removed. Two ligatures were applied to arteries in the walls of the abdomen.

The sac with the contents weighed twenty-one pounds. The cyst was compound, consisting largely of an innumerable number of minute ones, giving the characters of a solid mass. The contents varied from a perfectly limpid serum to very stiff gelatin.

The external wound was closed with interrupted sutures three-

† Atlee's Tables, given on the authority of a letter from Prof. M.

‡ Letter from Prof. Mussey.

§ *Cin. Lancet* for April, 1858.

fourths of an inch apart. A tent of lint was placed in the inferior extremity of the wound, and the ligatures brought out through the same opening. A web of cotton was placed over the abdomen and secured by a bandage. The patient being intolerant of the use of opium, the tincture of hyosciamus was given in thirty drop doses, every two hours. Vomiting and diarrhœa were troublesome for several days; the latter was finally restrained by the use of the nitrate of bismuth.

On the sixth day, there being suppuration and a bad odor from the wound, Peaslee's artificial serum was injected through a catheter. For a week this was repeated daily. During a second week it was used on every alternate day, after which water was substituted.

The ligatures came away on the 19th and 24th days. At the date of the report, one month after the operation, there was a fair prospect of recovery. This was thwarted, however, and Mrs. S. died on the forty-fifth day.*

Case 48.—Mussey, F. B.,† of Portsmouth, Ohio. This operation was performed Dec. 1, 1857, on Mrs. Sexton, aged 39 years. The patient was considered to be in excellent condition.

The incision through the abdominal walls was nine inches in length. No adhesions were encountered. "The pedicle was very short and broad, and so vascular as to require six or seven ligatures. A small tumor being discovered on the other ovary, it was also ligated and removed. The uterus was atrophied, being of less than half its normal size. Owing to the extreme shortness of the pedicle, the ligated stump was returned into the abdominal cavity, instead of being secured external to the wound, as was the intention of the operator." The patient died on the thirty-seventh day.

The disease originated in the left ovary. The tumor, with contents, weighed twenty-five pounds; the emptied cysts, four and a half pounds. It consisted, apparently, of three unilocular cysts, having a common pedicle.

Case 49.—Thompson, Robert.‡ This operation was performed on the 9th day of November, 1847. The patient was Mrs. Hugh P. Lytle, of Etna, Licking county. It was a compound cyst, weighing twenty-nine and one-half pounds. The patient died at the end of twelve days.

* *Cin. Lancet* for May, 1858. † Letter from the operator.

‡ *Ohio Statesman* of Nov. 10, 11, 12 and 22, 1847.

Case 50.—WEBER, G. C. E.,† Prof. of Surgery in Cleveland Medical College. The patient was Mrs. ——, of Trumbull county, aged about 45 years. She had always enjoyed excellent health.

On opening the abdominal parietes, the tumor was found closely and firmly adherent to the surrounding parts, and, accordingly, the extirpation was at once abandoned. The cyst was tapped, and the wound dressed for adhesion. The patient had been tapped twice.

The patient recovered without serious symptoms.

Case 51.—WEBER.† The patient was Mrs. ——, of Cleveland. Adhesions of a formidable character were encountered, upon perceiving which, the cyst was opened by a free incision. Some thirty pints of serum were discharged. The patient died in the course of two or three days, from gangrenous inflammation of the sac.

ANALYSIS—SUMMARY—PRACTICAL DEDUCTIONS.

Number of Operations.—Ovariotomy has been performed or attempted forty-two times, where patient and operator belonged to the State of Ohio; in eight cases, by Ohio surgeons, upon patients residing in other States; in one case upon a resident of Ohio, by a surgeon resident in an adjoining State, making a total of fifty-one cases embraced within the range of this report. Of these, twenty-five have hitherto been unrecorded, and several others only very imperfectly recorded.

Age of Patients.—This is given in twenty-five cases. The average is thirty-four years, and the extremes sixteen and fifty-six.

Relation of Cure to Age.—The average ages of the younger twelve is twenty-six and one-half years, of which eight were cured.

The average ages of the older twelve is forty-three and two-thirds years; of these five only were cured. *Or, in the younger patients, the operation has been more successful than in the older, in the relation of eight to five.*

Effects of Tapping.—In nine cases tapping was performed from one to ten times in each. In six of these extirpation resulted in the cure of the disease. *Tapping, accordingly, does not seem to have vitiated the prospect of success.*

Adhesions.—These are characterized in thirty-three cases. In twelve cases they are said to have been "slight" or absent. In nine of these, or three-fourths of the whole, the patient was cured.

In twenty-two cases they are called "strong," "firm," "exten-

† Letters from Prof. Delamater.

sive," etc. Of these only four, or less than one-fifth, are cured. *The prospect of cure is good in proportion to the indications of the absence of adhesion.*

Length of Incision.—Specified in twenty-nine cases. In two cases the minor incision of three inches was made. One of these was temporarily, and the other permanently successful. In thirty-seven cases, it was from six to twenty inches. *The peritoneum may be injured, and its cavity and the abdominal and pelvic viscera exposed, with a great degree of impunity.*

Separation of Ligatures.—The time is specified in reference to eighteen ligatures. The extremes are fourteen and twenty-nine days; the average twenty-four days.

Time at which Death Occurred from Operation.—Specified in twenty-three cases. In two cases it is one year; in one case four and a half months; in three cases, from twenty to forty-five days; in five cases, from seven to seventeen days; in two cases, five and six days; in six, on the third day; in three cases within two days, one dying on the table.

Cause of Death.—Specified in fourteen cases, viz: Acute Pneumonia, one; Gangrenous Inflammation of sac, two; Congestion of Brain, one; Inanition, one; Shock, one; Exhaustion, one; Hemorrhage, three; Peritonitis, four.

Extirpation Impracticable.—This was the fact in thirteen cases, or more than one-fourth of the whole, viz: in 3, 6, 29, 34, 39, 40, 42 43, 44, 45, 46, 50 and 51. In seven of these cases, the unsuccessful attempt was evidently the cause of death, which occurred in every case within forty-five days; in six within seventeen days; in five cases within seven days.

Two (29, 40) recovered temporarily, each living about a year. One (44) was permanently cured. Three others, viz: 42, 43 and 50, are supposed not to have been made better or worse.

Extirpation Practicable.—In thirty-seven cases, or nearly three-fourths of the whole, the extirpation was accomplished.

In sixteen of these cases, viz: 2, 5, 7, 11, 14, 15, 16, 17, 21. 26, 27, 28, 32, 47, 48 and 49, death was evidently caused by the operation.

Cures.—In twenty cases there was recovery, after extirpation, without relapse, so far as is known, and attended uniformly with restoration to a good state of health. To this number, as cured, forty-four is to be added, making, as cured, a total of twenty-one.

Further: adding 42, 43 and 50, which are supposed not to have been either better or worse for the attempt at extirpation, and we have 24 surviving, and 27 perishing by the operation.

Subsequent History of Successful Cases.—No relapses are known to have occurred. Sixteen patients, viz: 4, 9, 10, 12, 18, 19, 20, 22, 23, 24, 31, 33, 35, 36, 37 and 38, are known, from recent letters, to be still living and in good health; 8, 30, 41 and 44, are known to have been in good health after the operation, at periods varying from a few months to four years, but beyond that the result cannot now be given; 29 and 45 each survived about a year, but are reckoned as unsuccessful.

Size of Tumor.—This is specified in twenty-nine cases. The smallest two, weigh five and seven pounds. The largest two, one hundred and six, and one hundred and thirty-six. The largest two, followed by cure, weighed sixty pounds each. The average in twenty-nine cases, specified, is thirty-four and two-thirds pounds. The fourteen smaller ones average nineteen pounds each, and include most of the fibrous or solid. Of these, three only, or about one-fifth, are cured. The fifteen larger ones average forty-nine pounds, and consist mainly of the compound cystic. Of these, nine, or more than one-half, are cured. *Or the extirpation of the larger ovarian tumors has been more successful than that of the smaller, in the proportion of nearlg three to one.*

Pathological Characters.— In forty-one cases, the pathological characters of the tumor are specified. Of these, thirty-two are cystic, seventeen compound, twelve simple, and two named as simply "cystic;" six are called solid, or fibrous; two omental; two uterine, and one tubal fetation.

Of the seventeen compound cystic, eleven recovered; of the twelve simple cystic, only four; of the six solid, or fibrous, only one recovered. Of the other solid tumors, one, mesenteric, was cured. Or, the compound cystic constitute more than two-fifths of the whole; the simple about two-sevenths; the solid, one-seventh. And while eleven-sixteenths of the extirpations of compound cysts resulted in the cure of the disease, only one-third of the simple cystic, and one-sixth of the solid, resulted successfully. Furthermore, the two omental, the two uterine, and one tubal fetation, specified above, are supposed to have been diagnosed as solid. Then, of eleven cases diagnosed as solid, only two are cured by extirpation, while in five-elevenths the diagnosis is inaccurate, the disease being

other than ovarian. There ought, accordingly, so far as this experience goes, to be no hesitancy in *rejecting the extirpation of solid tumors supposed to be ovarian, as an accredited surgical procedure ;* especially as it is matter of common observation that they are frequently *amenable to treatment,* are usually of *slow growth,* and not necessarily incompatible with a *comfortable,* or even *protracted* course of life.

Admissibility of Ovariotomy as an Accredited Operation.—The expectation of life, from the time of the discovery of the presence of ovarian disease, is assumed as five years.

The average duration of the disease at the time of operation, in sixteen cases given, is about three years, and this is assumed as the average of the fatal cases. This, deducted from five years, the average expectation of these patients, leaves two years as the average expectation at the time of the operation.

The aggregate of deaths caused by the operation, including one of Dr. Dunlap, designated recovered, also 29 and 45, which lived a year each, is twenty-six.

Each of these cases being entitled to two years of life, it follows that fifty-one cases of ovariotomy have sacrificed *fifty-two years* of human life. But, these were the latter years of these patients, and consequently years of great suffering.

The average ages of the patients which recovered, is thirty-four years. The expectation of life at the age of thirty-four years, according to the Carlisle tables, is thirty-one years. Each of these patients, however, without operation, is entitled to two years, reducing the expectation growing out of a cure, to twenty-nine years. Then, the operation having cured the disease in twenty-one cases, it follows that, by hazards, resulting in the loss of fifty-two years of life attended with great suffering, surgery has secured *six hundred and nine years* of good health, or nearly twelve to one.

In the above, five years is assumed as the average duration of life in all cases, whether the disease is cystic or solid. It may be claimed that the average expectation in case of solid tumors, is greater than this, making the average too small. To avoid even the appearance of sophistry, let these cases be left out of the account, and the argument may be thus stated:

Ovariotomy has been undertaken in Ohio, and by Ohio surgeons, in thirty-two cases, characterized as cystic tumor.

In eleven of these cases the average duration of the disease is three years, and this is assumed as the average duration of the dis-

ease in all the cystic cases. This, deducted from five years, the average duration of life in connection with cystic disease, leaves two years as the average expectation, at the time of the operation.

The operation is admitted as the cause of death in fourteen cases of cystic disease, viz: 2, 7, 17, 27, 28, 32, 39, 42, 44, 45, 47, 48, 49, and 29, which latter survived one year. The consequent loss of life, admitted to have resulted from thirty-two cases of ovariotomy for cystic disease, is twenty-seven years. This however is invalid life.

The operation in these thirty-one cases of cystic disease, resulted in the permanent cure of the patient in sixteen cases, viz: 1, 4, 9, 20, 22, 23, 24, 25, 30, 31, 33, 35, 36, 37, 38, and 41. The average ages of these patients, in nine cases, is thirty-two years, and this is assumed as the average of the whole. The expectation of human life, at the age of thirty-two, is thirty-three years.

Each of these patients, without operation, is entitled to two years, reducing the expectation, growing out of a cure, to thirty-one years.

Hence, the operation having cured the disease in sixteen cases, it follows that, by risks in thirty-one cases, resulting in the aggregate loss of *twenty-seven years of invalid life*, surgery has saved to society *four hundred and ninety-six years of good health*, or nearly *fifteen* to *one*.

Hence, as the conservator of the life and health of his patients, *the surgeon, ordinarily, has no right, till a less hazardous or more successful treatment is presented, to withhold the operation, when the diagnosis of cystic disease is clear; if, after a candid and full statement of its hazards, the patient is desirous to assume them.*

This practical deduction applies, with especial force, to the proliferous cyst; because of its *rapid growth; the success which has attended its extirpation, and its not admitting of either palliation or cure*, by other means.

Surgical Cases. By Dr. F. Hurxthal, of Massillon, Ohio.

Case I.—*Ligature of Middle Meningeal Artery.*—John Uran, engineer, Pitts. F. W. & C. R. R., came in collision with a freight train, receiving a severe fracture of the left parietal with a portion of the superior part of the temporal (squamous) bone, a large portion of which was depressed. Convulsions and coma immediately supervened, upon the receipt of the injury, and continued until the de

pressed bones, 6 in number, were removed. After cleansing the wound of the clots, it was found that the middle meningeal artery was ruptured, and the blood ejected to a perpendicular hight of nearly 3 feet. The patient having already lost considerable blood, I felt confident that he must soon pass from the stage of action, unless prompt and efficient means were taken. I, at once, took up a fold of the dura mater, inclosing the artery, and placed a ligature around it, not without many misgivings as to the result of the procedure. The wound was closed with adhesive straps, and water dressings applied. The case continued to do well, and after the lapse of 4 to 6 weeks all the ligatures were removed except the one on the middle meningeal, and until it was thrown off (which did not occur until the 27th of December, 69 days,) I had much solicitude for the result. The amount of bone removed was one inch wide, by full two inches long, extending from the coronal suture anteriorly, to the posterior border of the temporal muscle. Shortly after the accident it was observed that the patient could not open his jaw ; indeed a perfect state of trismus obtained, so that it was a difficult matter to introduce sufficient food to sustain the patient. For the first 6 weeks nothing but fluid aliments could be taken ; from that time to this, now nearly 9 months, he has gradually recovered. Small pieces of bone were extracted from the fistulous openings, at intervals, up to July. The immovable condition of the jaw has entirely disappeared ; he has regained his ordinary weight and feels, in every particular, well.

Case II.—*Compound Fracture of the third and fourth metatarsal bones of the left foot, with subsequent death of all the tarsal and metatarsal bones except one, from Phlegmonous Erysipelas.*—This case occurred in October, 1857. Shortly after the accident traumatic erysipelas made its appearance at the seat of laceration of the soft parts, directly in the center of the sole of the foot. The inflammation spread rapidly, and the constitutional disturbance was so violent that for several days little hope was entertained of his recovery. In the treatment we resorted to the use of tinct. ferri mur., in liberal doses, alternated with quinine and wine—local application of saturated solution of sulp. ferri was energetically kept up, by wetting cloths in the solution and swathing the leg to the knee. Upon subsidence of the erysipelas, there was found a large gangrenous spot on the dorsum of the foot, one and a half inch in diameter. The connecting tissue of the cuticle was entirely destroyed as high up as the upper third

of the tibia, and the skin hung around the limb, much like a very loose stocking, and was filled with a dark reddish, fœtid pus, which was evacuated below the external malleolus. By compress and bandage, well applied, the parts above the ankle joint gradually assumed a healthy condition.

Not so, however, with the foot, unmistakeable evidences soon pronounced the destruction of the os calcis, large portions of which, from time to time, were removed. In the course of a few weeks we were satisfied that all the tarsal bones, except astragalus, were involved and must necessarily come away. These representations were presented to the father, and two methods of treatment proposed. 1. Operative procedure to remove all the diseased bones, and if the tibia was found involved to amputate at the place of election. 2. To use constitutional remedies and watch the progress of the case. The latter method was adopted. The general health of our little patient (aged 14) responded to tonics beautifully, and as soon as weather permitted he was taken out every day. Crutches were soon called into requisition, and after a year's use he gradually threw them aside. At the present time he walks and runs with much comfort to himself without crutch or cane, and appears to have as much interest in, and takes as active a part in, the school boys' games as any one of his age. There is considerable contraction of the gastro chnemius, which it is my intention soon to endeavor to reduce. The sinuses are not all entirely healed; the discharge is, however, very slight.

Case of Strangulated Hernia. By JAMES S. REEVES, M.D., McConnelsville, O.

In the month of July, 1858, I operated for Strangulated Hernia, in a case of much difficulty, and with so favorable a result that I must give you some account of it.

John Ray, farmer, aet. 63, was taken suddenly ill in the harvest field, on Tuesday, July 13th. He went home, submitted to some domestic treatment, and felt better. On Wednesday morning he resumed his work, but complained of soreness in the right groin. There was much gastric distress, and he vomited frequently. The illness increased, and he again gave up his work and returned to the house, and passed the balance of the day and the night wretchedly.

On Thursday (15th) he sent for me; I found him laboring under the usual symptoms of strangulated hernia. Upon examination, I found a femoral hernia of the right side, strangulated.

I learned from him that in the year 1848 he received an injury in the right groin, from being struck by the handle of a plow while at work (a common occurrence among farmers), and soon after discovered a lump as large as a cherry, on the inner aspect of the right thigh, which would disappear on pressure, and return again when the pressure was removed. The "lump" gradually increased in size, and was thought to be a "wen." When about the size of a walnut, and after exerting himself, it became sore, and he had pains in the bowels, and vomited. Dr. P. B. Johnson, who was at that time his family physician, was consulted, and prescribed a brisk cathartic; the bowels were evacuated, and the patient went about his work again. Two years later his "wen" (as he persisted in calling it) became sore, and he vomited much, and had pain resembling colic. Dr. Edward Dawes was applied to and prescribed a cathartic, which relieved him. In 1854 he had a similar attack, and applied to me for a brisk physic, which was sent, and had the desired effect; and he had no further trouble with it until July 13th, when he was attacked as described. He supposed it to be an attack of billious colic, and had taken several portions of pills, and some castor oil, with the effect to aggravate all the symptoms.

I put him in a warm bath, and administered nauseants, and applied the *Taxis*, but without the slightest good effect. The hernia was irreducible, and I proposed an operation. To that neither the patient or the family would consent, and I was forced to yield to their desire to have him relieved otherwise.

The bowel had been strangulated nearly three days; the symptoms were violent, vomiting of stercoraceous matter incessant, constant hiccough, pulse 120, feeble and irregular. At 2 o'clock P. M. administered Hyd. Sub. Mur., 15 grs.; three hours later gave Croton Tiglii 3 drops, in emulsion; at 7 o'clock P. M. gave 3 grs. solid Opium; at 10 P. M. 3 grs. Opium, and at 1 A. M. 4 grs. Opium, under the influence of which he rested and slept six hours. Upon awakening, enemata were used, the abdomen fomented, cold applied to the seat of hernia, and the Taxis applied, without anything being gained. Treatment was continued until Sunday morning (18th), when I assembled the family and urged them to consent to the op-

eration, as affording the only chance to save the patient—stating my fears that the relief might (from loss of valuable time) come too late.

The patient and friends consented, and I proceeded to operate without further loss of time. The patient was placed upon the table, and Dr. J. H. Brown, of this place, (whose presence I had requested, and who rendered me valuable assistance,) endeavored to administer chloroform, but the patient objected to it so strongly, and put it aside with so determined an effort that its use was abandoned. A series of incisions was made through the tissues external to the sac, all of which were adherent, completely agglutinated, and in a highly congested state. The sac was adherent to the mass of tissues in part and could not be separated. The incision was then carried down to the bowel, which was also adherent to the peritoneum. The adhesions were with difficulty broken, and the bowel separated from the surrounding tissue down to the ring. The ring was then nicked in thirteen different places, the incisions being made through the sac, and the bowel was liberated and returned.

The wound was partially drawn together, water dressing applied, and the patient put to bed. Doctor Brown went home, and I remained with the patient. Gave opium, 4 grs. Patient was easier, but the retching continued throughout the night at intervals—hiccough persistent. At 8 o'clock, A. M., (19th) gave opium, 4 grs. Vomiting at longer intervals; hiccough still troublesome. 1 o'olock P. M., gave opium, 4 grs. At 3 o'clock P. M., vomited stercoraceous matter, and complained of pain in the illeo-colic region, and suffered greatly for a few minutes, when the bowels gently moved with an abatement of all the urgent symptoms. At 6 o'clock P M., gave opium, 3 grs., and soon after the patient sunk into a refreshing sleep. There was a gradual improvement during the night; the bowels moved several times—pulse 100. The patient continued to improve until Wednesday, when the sac began to protrude, and there was a discharge of pus from the wound. Removed the dressings, and with a double tenaculum seized the sac, and with bistoury and scissors, removed it, leaving only a small portion of the sac adhering to the ring. The surface of the wound presented a healthy appearance. The wound was again partially closed, and the water dressing continued. The bowels moved several times each day, although restrained by opium. By Friday, the vomiting had entirely ceased—occasional hiccough. On Saturday

(25th) I again opened the wound, from which pus continued to be freely discharged, and by proper manipulation succeeded in bringing away the balance of the sac. The cavity was then carefully cleansed, and the lips of the wound made to approximate as nearly as the granulating surfaces would justify, and dressed with a slight compress over simple water dressing. The wound closed slowly, but kindly, and the patient rapidly regained his health.

I am well aware that reports of operations for strangulated hernia are prosy, and not of much interest, but this case presented a combination of obstacles to a favorable result, which I think are worthy of note.

The hernia was of ten years' standing, and the bowel was not returned to the abdomen during the four years preceding the operation. The patient was 63 years old. The strangulation commenced on Tuesday, and continued five days before the bowel was released. The consolidation of the tissues external to the sac, (the result of previous inflammation,) the partial adhesion of the sac to the tissue around it, and which could not be broken, and its firm adherence to the ring, (and I have reason to believe to some extent the internal surface of the sheath,) rendered the operation exceedingly difficult and set the usual rules at defiance. In ordinary cases the nicking of the ring at the point of stricture, generally suffices to release the bowel, but in this case, it was not until the ring had been repeatedly cut and adhesions broken with the finger nail that the bowel could be returned. The bowel was much discolored and looked unpromising, but felt firm, and when the length of time it was girt by a ring of almost cartilaginous hardness is considered, its escape from destruction is a matter of surprise. The return of the bowel without the sac, and the subsequent removal of the sac, and complete recovery of the patient without an untoward symptom, have combined to make the case one of interest here, and I trust this imperfect sketch may prove of sufficient interest to the readers of the Journal to repay them for a perusal.

Case of Voluntary Dislocation of the Os Humeri. By C. E. WACHENSHWANZ, M.D., Columbus, O.

I was called, on the 22d day of May, 1854, on board the Hamburgh bark John Herman, Capt. J. Dickman, to see a sailor who

had luxated his shoulder. Upon inquiry, I ascertained that it happened while he was engaged in lifting the side of a tool-chest, weighing about three hundred and fifty pounds. The luxation was downwards, and inwards. I closed my left hand, and placing it in the axilla of the side affected, took hold of the humerus above the elbow, and pressing it to his body, to my surprise the luxation was reduced.

Capt. D. observed, that he was an indolent fellow, and could dislocate his arm whenever he pleased; which he had done several times on the voyage, particularly in port, to escape work. This observation attracted my attention, and I asked the man if he could put his shoulder out of place at will. He answered in the negative, but said that very light causes had that effect, especially when he bent his body far over to raise anything. I desired him to demonstrate to me what he meant. A keg of dry prunes, weighing about 100 pounds, was placed before him. He bent his body over it, and by elevating one end about ten inches from the floor, the shoulder was again dislocated. He could also, by pulling horizontally, remove the head of the bone from its socket. I reduced it again with the greatest ease, but required a small pad in the axilla and moderate extension to accomplish it. I could not succeed as in the first instance. No pain whatever was created either by the luxation or reduction of the bone, and none existed during the displacement.

This fellow certainly had the power to luxate his os humeri at discretion, without pain or uneasiness; and immediately after I reduced it, he went to work as if nothing had occurred.

By a close examination of the shoulder and breast, no defect of the muscles was to be found; on the contrary the muscles were well developed. The man had great physical strength. Age about 24 years; had been a sailor almost nine years.

Case of Cystitis treated by injecting the bladder. By ROBERT M. DENIG, M.D. Columbus, Ohio.

The subject of the following case was a married lady, aged 26; mother of three children, and had usually enjoyed good health. Was called to see her on the 20th of July, one year ago, and learned from herself and her attending physician, Dr. Little, that, previous to her confinement, which took place in the preceding April, she

had suffered considerably from a difficulty in retaining the urine—but as the period of her confinement was rapidly approaching, her symptoms were supposed to depend upon her gravid condition —and no very persistent efforts were used to remove them. She was confined on the 5th day of April, with a perfectly natural labor, and had an ordinarily good recovery; no unpleasant symptom occurring except the persistence of the above mentioned urinary difficulty—which, in place of being relieved, became rather aggravated, and the discharge at times tinged with blood. About the middle of June following, having occasion to perform more than her accustomed amount of domestic labor, part of which consisted in washing, she was attacked on the following day with severe hæmaturia, and greatly increased inability to retain the urine. For this, she had various appropriate remedies, such as act. pot., parera brava, mucilages, &c., continued with dry cupping to the loins, warm sit-baths, and complete rest. When I was called to see her, she was passing per urethra, large quantities of almost pure blood, there being as much blood as urine, the latter always coming at the close of the evacuation, followed invariably by the most excruciating pain.

The pain, although much mitigated previous to the next evacuation, was never entirely absent. At this time she was taking act. lead and opium. As no very marked benefit had seemed to follow its use, we concluded to put her upon the use of Gallic acid and opium. The Gallic acid acted with great promptness, the hemorrhage diminished rapidly, and after three days the blood corpuscles could only be detected under the microscope.

It now became a matter of no small moment to determine the source of the hemorrhage—whether from the kidneys or bladder. The urine was diminished in quantity, amounting to about a pint and a half in twenty-four hours; showed no traces of albumen either with heat, or nitric acid, or both; was always acid in its reaction; sp. gr., 1025, and under the microscope revealing nothing but a few blood corpuscles with epithelial scales. Little or no pain in the region of the kidneys, on careful pressure; but constant pain in the pubic region, aggravated by pressure; pain after micturition, excruciating, referred invariably to the urethra. Under supposition that calculus might be present, we carefully sounded her twice; the passage of the sound, and any motion of it in the bladder caused the pain to be greatly aggravated, but no indication of the presence of stone could be elicited.

The constant acid condition of the urine seemed to contra-indicate the presence of cystitis, to which all the other symptoms pointed. The absence of the ammoniacal condition of the urine, which is usually present in inflammation of the bladder, could be satisfactorily accounted for, by bearing in mind the shortness of the time it was retained, not being long enough to allow of decomposition. And this explanation was confirmed by the fact, that, when at one time it was retained some hours, under the free use of opiates by suppositories and by the mouth, it was strongly ammoniacal immediately on its evacuation; and it invariably became highly so, upon standing some time in the vessel.

The symptoms then were, constant pain in the pubic region; inability to retain the urine more than an hour, even in the recumbent position, and scarcely fifteen minutes when on the feet; excruciating pain invariably following it; tinged more or less with blood, and not coagulable. Looking upon it as a case of Cystitis, in which the mucous membrane was deeply implicated, and as our general remedies had failed to give much relief, we resolved to resort to injection of the viscus itself.

Accordingly, on the 22d of August, we threw into the bladder, after having previously emptied it of its contents, four ounces of a solution containing five grains Sul. Zinc to the ounce of water. After retaining it a few minutes, it was allowed to pass off. The injection was followed by severe pain, but was, upon the whole, somewhat beneficial. After an interval of ten days, we determined to repeat the injection, and to substitute the nit silver for the sul. zinc. Of this, four ounces of a solution of the same strength as the previous injection, were thrown into the bladder, and suffered to remain ten minutes. The pain experienced by the use of the nitrate was greatly less than that from the zinc. The tolerance of the urine was so much increased by the use of these injections, that two and sometimes three hours could be passed in comparative comfort without voiding it. On the 13th of September, the same amount of injection of the same strength was repeated. No unpleasant effects followed, but on the contrary, marked relief of all the symptoms; nor was it found necessary to carry them any further. The subsequent use of the fluid ext. of par. brav., and mild laxation, completed the course, restoring the patient from a painful and loathsome disease to health, comfort, and the enjoyment of her family.

We do not suppose there is any great novelty in the above case,

and would not trouble you with any account of it, were it not for the fact that we could get very little encouragement, either from brother practitioners or books, for resorting to the measures instituted. There seems to be a dread of injecting the bladder, which circumstances, as developed in our case, would not justify.

Biliary Calculus.—A Case. By H. Z. Gill, of Columbus.

Mrs. L., æt fifty-eight, large frame, bilio-nervous temperament, has generally enjoyed very good health; was attacked in December, 1857, with severe pain in the stomach and bowels, resembling colic, attended with vomiting. This continued, notwithstanding all the means made use of to relieve, with but slight intermission for nearly three days. The pain, at times, was most severe, but the pulse at the same time little affected. Purgatives were given, and though six Seidlitz powders were given during one night (three only having been ordered) no operation could be produced until an enema was used. After the second operation from the bowels there was much relief experienced. Two or three biliary calculi were passed, the largest nearly the size of a pea.

From this time, for some months, she slowly but gradually improved in health with occasionally a slight attack of ague, which would come on by being exposed to damp or cold air. During the fall and winter of 1858 and '59 the chills came on more frequently, and could only be prevented by anticipating them with quinine. In some of these attacks the cold stage was almost imperceptible, and very little inconvenience felt with the exception of an unpleasant feeling in the right side sometimes amounting to a pain, and increasing as the hot stage came on during which the pain was almost intolerable in the side, shooting about to the shoulders, and down the spine and lower extremities ; at the same time the pulse would rise to a hundred and thirty, forty, or fifty as at one time, and continued at that rapidity for about four hours, it being almost impossible to retain any medicine on the stomach on account of such frequent and severe vomiting, to control it. After this was passed the sweating stage would supervene, and the patient would perspire till she was bathed in perspiration.

The day following such an attack, besides the debility, there would be pain and tenderness in the region of the liver; the tongue would be heavily coated, in the case when the pulse continued so long at such a rapid rate; it was very dark, and was many days in cleaning off. The urine also would be loaded with bile, at times quite thickened with it.

As might be supposed, the patient was very much constipated, so much so that enemata, two or three times a week during the last few months of her life, were required. There were many other additions to her sufferings that might be mentioned, one of which was inflammation of the cardiac orifice and lower portion of the esophagus continuing some days after an attack, and sometimes until removed by internal use of ice, and counter irritation. Swallowing from this cause was at times almost intolerable.

In the latter six months of her life, but very seldom was there any bile expelled even after the most prolonged and powerful vomiting. Previously there had been every time the vomiting came on.

Autopsy.—The body emaciated; integuments tinged with retained bile. The intestines normal, except the large ones which were impacted. The liver healthy in color. All of the ducts coming from the liver were enlarged, some to the size of the little finger or larger. The ductus communis was entirely obstructed with two large biliary calculi.* The gall bladder contained some pus and bile, but was very much contracted and thickened in its walls. The calculi had the appearance of having been originally one; but the two parts were nearly equal in size, and the facets being at right angles to the axis of the duct, were worn smooth by friction. The end of one of the portions of the calculus extended very near to the duodenum; the other in opposite direction, beyond the junction of the cystic and hepatic ducts. This is no doubt the reason why there was so little bile in the gall bladder, and also why it was not rather enlarged than diminished.

Thus the case continued, varying in some of its symptoms, till the close of life, which took place on the morning of July 9th.

The treatment for the last year consisted of such remedies or pali-

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*The weight of the two parts of calculus, a month after their removal, was five grains less than two drachms.

ations as the case naturally suggested; quinine, as before mentioned, liberally to support the strength and to postpone an attack as long as possible, which sometimes amounted to three or four weeks; also anodynes to relieve the pain. Previous to the above mentioned time cholagogues of different kinds, and with some benefit for a time, had been used.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

Gulstonian Lectures. On Fever and Inflammation. Delivered before the Royal College of Physicians, London, 1859. By William Addison, M. D., F. R. S., F. R. C. P.

Lecture II.

IX. *Fever.*—When a person is inoculated with the virus of smallpox, a poison is introduced into the body—nay, into the blood. That it distempers the blood, is concluded from the generality of the symptoms.

These are, rigors and shivers over the whole body; to which succeed a fever, hot skin, quick pulse, and general illness, accompanied with severe pain in the back and head, inclination to vomit, pain on light pressure at the pit of the stomach, stupor and drowsiness.

Counting from the first invasion of the fever, the pustules of smallpox arise on the fourth day, rarely sooner. At first very small, they grow greater every day, and rise more and more to a head filled with pus. About the eighth day, the spaces between the pustules look red, and the hands and face swell. On the eleventh day, the swellings are evidently going down, and the pustules have reached their full magnitude. At this time, the fever has greatly diminished or wholly vanished.

Matter taken from any of the pustules will reproduce the fever with certainty in a person who has never had it. The virus, therefore, has been multiplied a myriad fold—regenerated in the body of the patient. And the question proposed is: To what element of the tissues or of the blood is the reproduction of the virus to be attributed? The pustules do not make their appearance until some days after the fever; excluding them, therefore, from any share in *generating* the virus, the plasma and the corpuscles of the blood remain for examination.

Liebig, it is well known, ascribes the phenomena which succeed the introduction of the smallpox virus into the blood to a process exactly resembling fermentation. Yeast, he says, is putrefying

gluten, and its component particles are therefore in a state of intestine motion or transformation. And he lays down the proposition—that a substance in the act of decomposition, added to a mixed fluid in which its constituents are contained, can reproduce itself in that fluid exactly in the same manner as new yeast is produced when yeast is added to liquids containing sugar and gluten.

Thus the virus of smallpox, which virus is formed out of blood, causes such a change in blood as gives rise to the reproduction of the virus from the constituents of that fluid ; and the transformation is not arrested until all the particles of the blood which are susceptible of the decomposition have undergone the metamorphosis.

Admirable as this teaching is, there is another view of the matter. Naturalists insist that yeast is a growing plant ; and physiologists insist that changes in a medium in which living bodies grow, are to be referred to other laws than those of ordinary chemical affinity.

In the January number of the Quarterly Review, for the present year, the writer of the article "On Bread," says :—"The yeast-*plant* represents one condition of a species of fungus remarkable for its wide distribution and the magnitude of its effects. The forms in which it is familiar to most persons, are yeast, the vinegar-plant, and the common blue mould which occurs on sour paste. Yeast and the vinegar-plant are the forms in which it vegetates under various circumstances, when well supplied with food. Mildew or mould is its fruit. The yeast plant," he goes on to say, "is a wasteful feeder. Not only does it decompose so much of the liquid as it requires for its own nutrition, but it produces a similar decomposition in the liquid around it; and this *contact action* is at present a stumbling block to natural philosophers, many of whom are earnestly endeavoring to surmount it. The chemist refers it to the same unexplained force by which inorganic substances cause the combination or separation of substances, without themselves undergoing alteration ; as when spongy platinum causes a mixture of oxygen and hydrogen gases to unite and form water.

Many thoughtful and learned men have protested against the prevalent tendency to explain all vital phenomena by physical and chemical laws only, without regard to the order of conceptions specially belonging to vital phenomena However this may be, the multiplication or increase of a contagious virus—such as that of smallpox in the blood of a living person, its discharge by the pustules of the skin, and the patient's recovery from it—may *a priori* be assumed to be something more than a simple physical fact.

But let us state the argument from which we shall conclude that—

X. *The Virus of Smallpox is generated by Abnormal Metamorphosis or Diseases of the Corpuscles of the Blood.*—It has been established by unquestioned microscopical observations, that the qualities and secretions of an organ are aggregates of the qualities and secretions of the minute cells which compose it. In vegetable structures, the qualities of the leaf are produced by, and reside in, the cells of the parenchyma of the leaf. The colors of petals and the qualities of fruits are aggregates of the qualities or properties of the cells composing these parts.

In animal bodies, the qualities and secretions of the liver, skin, and kidneys, are known to be produced in the cells or particles composing the parenchyma of these organs. In all cases that are known of the generation of poisons in a living body, the poison is a product of cell-metamorphosis. It is so in vegetable bodies—instanced by opium, strychnia, belladonna, etc.; the properties of the juice of the poppy and of other plants being generated in the cells of the plant. So also in animal bodies; the poisons of wasps, bees, and serpents, are generated by the metamorphosis of cellular bodies.

Analogously of blood, we have shown that some of its most prominent and important qualities are qualities of its corpuscles, of the cellular bodies floating in it. And we have discussed the physiological production of matter in the blood corpuscles of the human body which is poisonous to the brain, namely, the matter of venous blood. When, therefore, as in smallpox, blood becomes the seat of a contagious poison which has been generated in it, there is a strong inducement to interpret the pathological fact by reference to physiological laws and phenomena. And this consideration has much more weight than might at first appear; if we find contagious fevers arise from exposure of the blood to miasms in the atmosphere, that the infection is received during respiration, and through the lungs, where we have actual proof that the corpuscles are naturally changed in properties and color; and if not so changed, that they carry within them a poison through the body which disturbs the functions of the brain.

It seems opposed to all reason to infer that the smallpox virus, a matter of definite quality and action, often generated in the blood in very large quantites in a few days, should be referred to the plasma, a fluid of variable composition, when all analogy bases it in the corpuscles.

Upon these grounds, we put forth the following physiological interpretation of the phenomena which succeed the introduction of the smallpox poison into the blood by inoculation. The corpuscles of the blood, passing in the vessels at the moment these are wounded and opened by the instrument which introduces the virus, are the first affected by it; and from them the rest of the corpuscles are infected by contagion, or contact action. The spreading of disorder from corpuscle to corpuscle, throughout the blood, is denoted by the fever which rises daily greater and greater, until inflammation and pustulation are established.

The physiological demand is here deemed analogous to that where abscess and ulceration is established for the expulsion of a thorn or a slough. That is to say—in thorns, sloughs, and necrosis of bone, the demand is for the expulsion of an injurious body from the solid texture (the common tissue.) In smallpox and other fevers, the demand is for the expulsion of some hurtful matter from the plasma of the blood In both examples, forms of inflammation are the phenomena.

Life is a state of constant antagonism to the forms of dead matter; and any injury or decomposing tendency excites reaction. The

corpuscles of blood, infected with a contagious poison, therefore, react against it; they excrete, throw off, or free themselves from the virus, and their countless multitude gives quantity to the products. The prosecution of the virus then devolves upon the plasma; and in smallpox, inflammation and pustulation in the common tissue of the skin is established for its final expulsion and the patient's recovery.

It is of no consequence to our interpretation of the reproduction of the virus of smallpox, how the rival claims of chemistry and physiology are disposed of; for, whether the contagion does spread through the blood from particle to particle, in the manner of a chemical ferment, or whether from corpucle to corpuscle, as from one living body to another—whichever form of words or ideas is chosen, the proposition that the corpuscles are the particles of the blood through which the poison operates is agreeable with, or remains unshaken by the acceptance of either explanation, But, whatever be the order of our conceptions as relates to the regeneration of contagious poisons in the blood, whether chemical or vital, the same ought to be carried out in its consequences. Therefore, if the origin of the smallpox poison be referred to a chemical ferment, the origin of other poisons in plants and animals, ought also to be referred to chemical action. Should this be done, we may truly dismiss vital action and vital conceptions altogether from the scene. Are we yet prepared to go these lengths? Much consideration, we think, is demanded before an affirmative answer be given.

The assumptions necessitated upon either view of the phenomena of smallpox disease, may be considered as in favor of the physiologist. On the one hand, by the chemical philosopher, it is assumed that yeast is decomposing gluten; that the growth of yeast is a progress in decay; that the smallpox virus is in a state of intestine motion, and that this commotion is communicated to some unknown particle or ingredient in the blood. On the other hand, the physiologist does no more than state that yeast is a living plant; that the corpuscles of blood are living organisms with the properties of other cellular bodies, namely, growth and metamorphosis, and that some of them, infected by injurious matter imbibed from the air or otherwise introduced into the blood, communicate disorder to the rest by contagion, or contact-action. Of these two interpretations, the chemical one is unsatisfactory, because it breaks up all our ideas of peculiarities in living bodies; it leaves unexplained numerous other examples of contact-action in physiology, and it refers indefinitely to particles in the blood, without distinction between the plasma and the corpuscles; whereas, we point specifically to bodies floating in the fluid of the blood of the same class or kind with other bodies which are known to generate poisons, both in animal and vegetable structures, and which, moreover, in the human structure, do unquestionably generate and contain the matter or poison of venous blood. Lastly, there seems a preponderance in favor of the interpretation which bases the phenomena of smallpox fever upon the corpuscles of the blood rather than on the plasma; because, as we have said, in all instances known of the generation of poisons in living

bodies, animal or vegetable, the production of the poison is a function of analogous bodies.

The generation of a contagious virus in the blood and symptoms of fever go together; therefore, if the production of the virus be rightly ascribed to abnormal metamorphosis of the corpuscles, phenomena of fever must be based upon the corpuscles. It is to be examined, therefore, by what facts we support this more general conclusion.

Gout is a disorder attributed to altered qualities of the blood. Yet it forms a strong contrast with smallpox and other fevers; and from this contrast the suggestion arises, that if in either of the two diseases, gout or smallpox, the *materies morbi* can be fairly located to one part of the blood, the place of the other will have been found.

Now the close dependence of the plasma upon articles of diet, and the argument that the plasma may become distempered without necessarily involving the corpuscles, have been discussed. Gout is a disorder substantiating the argument. For its access is promoted in a very remarkable manner by a full and luxurious mode of living; and the more surely, if this be conjoined with a sedentary and inactive habit, which is known to produce inactivity in the depurating organs. The attack commonly comes on without previous warning. The person goes to bed and to sleep, thinking himself in his usual health, and is awakened in the middle of the night with pain and inflammation in one of his feet. If there be any previous indications of the approaching attack, they are referable to the digestive and depurating organs; such as diminished and high colored urine, diminished appetite, flatulence, and, perhaps, some slight diarrhœa, or its opposite, constipation.

In gout, inflammation is the primary and diagnostic phenomenon. That it is a depurative action, is shown by the result. There is no fever. A *materies morbi* is deposited at the place of inflammation; but this is not contagious. By proper medical treatment the natural depurating organs—the skin, bowels, and kidneys—may be stimulated to assist in removing the offending matter from the blood, so that the inflammatory reaction may be either shortened, mitigated, or altogether extinguished.

In contrast with this sketch of the phenomena in gout, contagious fevers arise in a different way; not through errors in diet, but from poisonous substances inhaled by the lungs or ingrafted into the blood. Symptoms of fever are primary features of the disorder. A contagious virus is generated in the blood, and inflammation is consecutive or secondary, following after symptoms of fever, because the plasma is distempered, not primarily, as it is by errors in diet, but consecutively, through the excretions of the previously diseased corpuscles.

These statements, we apprehend, contain the ground of distinction between erysipelas, as a local inflammation, snd erysipelatous fever; rheumatism and rheumatic fever. In the local inflammations

without fever, the plasma only ; in the fevers, both corpuscles and plasma are disordered.

As this is an important point of our subject, let us recapitulate the facts :

Diet replenishes the plasma ; and the plasma is the part of the blood from which elements of repair and inflammation are taken. Unwholesomness of diet disorders the qualities of the plasma, and produces gout, an acute inflammation without fever ; and morbid matter from the plasma is deposited at the places of inflammation. There are other inflammations where evidence of a depurative action upon the fluid of the blood appears.

Air acts directly on the corpuscles of the blood, which are bodies with the properties of cells. From substances in the air, fever arises ; and in fever, a contagious poison is generated in the blood. The corpuscles of the blood naturally contain within them the matter of venous blood, which is poisonous to the brain. And in other instances—in vegetable and animal structures—bodies, analogous to the blood-corpuscles, are the organisms in which poisons are produced.

From these facts, we draw the general conclusion that abnormal metamorphosis or disease of the corpuscles of blood, is the antecedent of fever ; and distemperature of the plasma, the antecedent of inflammation.

XI. *Inflammation as a Therapeutical or Depurative Reaction, in Cases of Fever.*—In some fevers, or in some cases of fever, the natural depurating organs are sufficient : or, by proper medical treatment, they may be roused to a sufficiency for the elimination and discharge of the morbid matter made over to the plasma from the diseased corpuscles. If this can be accomplished, there will be no call or necessity for any preternatural depurative reaction between the plasma and the common tissue. In such case, therefore, the person has, and must go through, the fever ; that is to say, the blood corpuscles must pass through the phases of their disorder ; but he is saved, by judicious medical treatment, from a local inflammation, because distemperature of the plasma, consequent upon disorder of the corpuscles, is met and relieved by the natural working of the depurating organs. These organs act upon the plasma ; and inflammation is an action between the plasma and the vessels. By one or the other, or by both ways, the fluid of the blood may be relieved of hurtful matter ; and as the severity and duration of symptoms of fever are a measure of the severity and duration of disorder in the corpuscles, so, we apprehend, the severity and duration of the consecutive inflammations are a measure of ease or difficulty with which the morbid matter separates, or sloughs off, from the rest of the fluid, and is made over to the common tissue for discharge. But, in cases of fever, we apprehend that neither the natural organs nor inflammation can effect this depurative purpose, so long as disorder is limited to the corpuscles.

The *materies morbi* of the corpuscles—of whatsoever nature this may be—must leave them, and be discharged into the plasma, before

any depurative means can come into play for the final expulsion of it from the fluid of the blood. This appears to be the *rationale* of our inability, by any means which have hitherto been tried, to cut short the progress of fever.

The argument respecting the therapeutical properties of inflammation in distemperatures of the fluid of the blood was partially discussed in the first lecture; and we now proceed with what further we have to say on this subject.

Case.—At 8 o'clock in the morning of Dec. 28th, a physician, who was assisting at the *post-mortem* inspection of the body of a lady who had died of puerperal peritonitis, unfortunately pricked his finger. Twelve hours afterwards, he felt some pain at the part; and he had it touched with nitrate of silver. During the night, shiverings came on, and he felt extremely restless. On the morning of the 20th—the next day—the finger was swollen, and red lines extended up the arm. In the evening of that day, the symptoms were not abated, and there was great prostration. On the 30th, the hand and arm were greatly swollen, the glands in the axilla were affected, and the pain was very great. On the 31st, the pulse beat from 90 to 100 in the minute; and the breathing was heavy and irregular, with torpor and drowsiness. In the evening, all the symptoms were increasing; and now an erysipelatous blush from the axilla extended over the side of the chest. During the night, the breathing became difficult, and the drowsiness passed gradually into deep stupor. Death took place at six o'clock in the morning of January 1st, not quite four days from the infliction of the wound.

In this case, the phenomena, in all important respects, are similar to those observed in traumatic erysipelatous fever, and in puerperal fever. The circumstance of the disease arising in the manner related —namely, from innoculation of a poison from the body of another person who had had the puerperal fever—establishes the relation between it and the contagious fevers, and shows that the fatal termination in so short a period is to be attributed, not to inflammation, but to disease of the blood. If this be assented to, the case is taken out of the category of inflammatory diseases, and is placed in that of blood diseases.

But if this and analagous cases—if erysipelatous fever, puerperal fever, gout, smallpox, and the other exanthematous fevers—be considered as blood diseases, a great step indeed will have been taken, in the direction we are arguing, towards removing inflammatory reactions altogether from the pathological list; and a wide avenue is opened for a reconsideration of their true import.

Moreover, much doubt is thrown upon the value of the labors of the pathological anatomist, who may regard effects left by internal inflammation in fatal cases of blood-poisoning as showing anything whatever of the nature or seat of the disease. For the question arises, whether inflammation, and the suppurations which may appear in contagious fevers, are not appropriately placed in the same class with inflammation and suppuration in smallpox, sloughing carbuncle, and necrosis of bone; all of which are indisputably thera-

peutical reactions, the only difference being that, in the one class of cases, the actions arise for therapeutical purposes in the solid parts—the common tissue; in the other, for therapeutical purposes having reference to the fluid of the blood.

If we impartially review phenomena of inflammation as a matter of natural history, and begin with the simplest cases—scalds, burns, sloughs, and fractures (injuries to the common tissue), and boils, eruptions, gout, and smallpox (from injury to the qualities of blood)—we can scarcely fail of perceiving, in both classes, that the forms and amount of the action depend upon, or are governed by, the amount or extent of injury sustained. And, if hindrances protract the process of repair, so also analogous difficulties protract depurative forms of inflammation. If keeping peas in a sore protracts granulation and discharge, so also perseverance in unwholesome articles of food will protract ulceration. In mechanical injuries, the cause of the injury (the heel of the horse, or the cart-wheel), the part injured (the torn flesh, or the broken bone), the extent and nature of the hurt (contusion, laceration, and comminution)—all these, and also the subsequent reaction (the process of repair), are objects either of sight or of touch, or of both. On the other hand, in injuries to the blood, all these things are, and to a great extent, must remain, matters of reasoning and deduction. We have said, that very little can be demonstrated of the vital and depurating processes constantly going forward in the blood of the living person. In the engrafted smallpox, it is true, the poisonous matter introduced into the blood, and the consequent inflammation and suppuration in the skin, are seen; but the essential part injured—the elements of the blood—the extent of their injury, and the depurative reactions going on amongst them, and which connect the introduction of the virus with the fever, and the subsequent inflammation and suppuration, are not seen. Likewise, in the fatal case just related, there was evidence of the introduction of poisonous matter into the blood through the wound of the finger; but the rapidity with which it spread throughout, and destroyed the normal quality of the blood, was only to be proved by the rapid course of the symptoms and the fatal termination. In this case, we argue that the inflammation and swelling of the glands in the axilla were reactionary efforts to arrest the course and eliminate morbid matter, though they failed; and they failed upon the same ground that similar efforts fail in cases of severe mechanical injury; namely, because the injury inflicted on the blood was so grent that life succumbed before measures of relief could come effectually into play. In severe mechanical injuries, persons sometimes die before, or soon after, a process of repair is established; so likewise, in injuries to the blood, persons will die before any inflammation appears.

XII. *Diseases of the Corpuscles of Blood.*—With respect to disease or abnormal metamorphosis of the corpuscles of the blood, and its association with symptoms of fever, numerous observers have described their darker color, and the easy transudation of their coloring matter in typhus. Denis, for example, describes the blood in typhus fever as deficient in fibrin. He says that air had no effect in

reddening it; and on analysis, it was found to contain ammonia. Dr. Armstrong observed the blood in typhus from the temporal artery as dark as that from the veins.

The general appearance of blood in malignant fevers has been described by Huxham and Fordyce. At the first commencement of symptoms of fever, the blood was sometimes buffed; but the clot beneath was always of a loose texture, scarcely cohering, and very dark in color. If the patient was bled two or three days after the onset of fever, the blood was found incoagulable, having the appearance as when spirits of hartshorn is added to blood as it runs from the vein, which darkens its color and prevents coagulation.

In the yellow fever of the West Indies, blood has been observed to be hotter than in health. As fever progresses, it becomes black and thin. Dr. Blair says that, in many instances the corpuscles were found so much dissolved that, in several specimens of fever-blood, but few of them could be observed.

It has been found that a diminished amount of carbonic acid is discharged from the blood by respiration in cases of fever; and this fact, taken in conjunction with the dark color of blood, is conclusive as to one, at least, of the functions of the corpuscles being disordered in fever.

Rokitansky, Simon, Perry, and many other accurate observers, all speak of the dark color and changed state of the corpuscles of blood in malignant fever, of the incoagulability of the plasma, and of the staining of the tissues and of the serum by the coloring matter which transudes the corpuscles.

As regards the microscopical appearances of the corpuscles of blood in fever, we hesitate at present to lay any stress upon them; because in persons in health, they very speedily change their figure and outline in a very uncertain manner. Some of them become notched with projecting points, and otherwise changed in outline; others assume globular forms; they are influenced as respects these changes, it would appear, by the temperature of the glass upon which they are received for examination, and by the way in which they are covered by the thin glass. Some are seen paler, and some smaller than others; some adhere closely together in rolls, others float about separately without the least disposition to adhere to their neighbors. All these varieties may be seen in the same small quantity of blood which is alone available for microscopical inspection, especially if the exterior edges of the film of blood be brought into the focus of the microscope.

Notwithstanding these obstacles to the drawing any positive conclusion from the microscopical appearances of the blood-corpuscles in cases of fever, it is quite as likely to be by the microscope as by chemistry that future advances in the pathology of these bodies will be made. For how can any bulky chemical manipulation satisfactorily eliminate results from the plasma from results from the corpuscles? especially if, under the influence of reagents, as we shall show, they throw out matter from their interior into the fluid in which they swim, and yet preserve their integrity or individuality.

"Hitherto, at all events," as Rokitansky has well observed, "chemistry cannot be said to have excelled, as respects the pathology of these bodies, the achievments of a circumspect anatomical survey, notwithstanding the limited resources at the disposal of the latter.

Experiment 1.—Take a slip of glass, such as is used for mounting microscopical objects, receive on it a very small drop of blood, and place close to it with a pipette a drop of any fluid, chloroform, ale, weak sugar and water, etc., and the quantity of extraneous fluid should not exceed the quantity of blood. Upon now dropping on the two fluids a thin piece of glass, their nearest edges will mingle, but in various proportions.

In these experiments we find the *outline* and the *interior* of the corpuscles of extremely various appearances in the same experiment, but nothing appears thrown out from them.

Experiment 2.—Proceed as in the last experiment, but let the fluid used be sherry wine. The corpuscles, along the line where the blood and wine mingle, will soon begin to throw out molecules around their circumference, many of which pass away into the fluid; others grow out into long tails, which remain attached to the corpuscles, and terminate in a knob. They also wave about in a very singular manner. After some time, (half an hour,) the tails or filaments become nodulated, and then break away from the corpuscles, and when they have done so, they continue their singular movements in the fluid.

Some years ago, when making observations on the plasma or liquor sanguinis of the blood, drawn by venesection in cases of fever and inflammation, we observed in the fluid a vast multitude of minute molecules. (*Medical Gazette*, vol. ii., 1841–2.) And the molecules seen in the experiment here related, are precisely the same in magnitude and appearance as those we saw in the fluid of blood drawn in the cases of fever. Now we believe that the blood-corpuscles do not immediately lose their vital or chemical properties when withdrawn from the body. Therefore, we regard the remarkable forms and actions they exhibit under the influence of sherry wine, as phenomena of a species of reaction, which, amongst multitudes of them, is various or unequal, hence the various appearances presented. In some, the resistance offered to the extraneous fluid is more easily overcome than in others.

We have frequently examined with the microscope blood taken from persons affected with scarlet fever, with reference to the appearances in the plasma, and have always noticed the following facts. The colourless or plasma corpuscles are much more numerous than in persons in health, and especially so if the blood be drawn from the skin as the fever is passing off and the epidermis beginning to exfoliate. They are of different sizes and present different appearances. In the open spaces between the rolls of the red corpuscles, irregular masses of granular matter and numerous free molecules are seen floating in the fluid.

In cases of diphtheria, we find that the plasma presents the same appearances as are seen in scarlet fever. Formerly we supposed the free molecules observed in the plasma of blood, drawn in cases of fever and inflammation, to be derived from the colourless corpuscles; but now that we have seen them thrown out by the red corpuscles, there is actual proof that these corpuscles, in their reactions upon extraneous substances, do themselves throw off matter into the fluid in which they swim. The appearances, then, which we have seen in the fluid of the blood in cases of fever, and the behavior of the corpuscles in the experiment we have related, appear to corroborate our conclusions respecting the excretions of the corpuscles passing into the plasma, and the association of these excretions with phenomena of fever.

Before proceeding with our argument, it will be convenient now to refer to some collateral incidents which require our notice.

First, it may be objected to our proposition respecting the antecedent of fever, namely, disorder or disease of the blood corpuscles, that in venosity of blood, where a poisonous element of the corpuscles fails of being discharged by respiration, the symptoms are those of brain disturbance and not of fever. In *morbus cœruleus* there is no fever necessarily.

To this objection it may be replied, that the presence of a venous quality in the corpuscles does not imply disorder or disease in them, in the same way that it is concluded to arise from miasms in the air. The substance—carbon or other matter—which gives to the corpuscles their venous character, is a substance natural to them, an essential ingredient of their composition in certain parts of their course in the circulation. Therefore, it is to be expected, it would occasion no unusual reaction on the part of the corpuscles themselves, though the brain suffers; whereas, a poison from the air may be presumed something quite heterologous to the corpuscles, and doubtless they react with more energy against a foreign injurious matter, than against anything which is a part of their normal composition.

In cases of blood-poisoning through the stomach, such as drunkenness from alcohol, narcotism from opium, and salivation from mercury, the locality and character of the symptoms point out which organ it is, that suffers first or most from a particular poison diffused through the plasma. And if in these examples fever be absent, the argument is, that the parenchymatous organ is affected before the corpuscles of the blood, fever appearing when they partake of the disorder.

In cases of blood-poisoning through the lungs, on the contrary, the symptoms begin with fever, and the argument is, that the corpuscles of blood are here affected first, before the plasma or any of the local parenchymata; fever denoting an abnormal metamorphosis of the corpuscles.

A venous state of the corpuscles of blood is not an abnormal metamorphosis. The condition comprehended in the term venous is one natural to them. Misplaced venous corpuscles disorder the

brain; but fever does not appear, because the venous state is natural to the corpuscles. The absence of symptoms of fever, when venous blood circulates arterially, is therefore no valid objection to the proposition we are arguing.

Again, we have hitherto purposely abstained from any reference to the brain or nervous system as causes of fever and inflammation, not because we underrate their powerful influence over blood and the secretions, but because so important a part of our subject requires a special consideration, which we can here but briefly indicate.

It has been argued in the former lecture, that the elements of the parenchymatous organs and the corpuscles of blood have the common properties of other living cellular bodies; and among these are properties of affinity, which differ in relation to different substances. And there can be no doubt that the corpuscles of the blood, as respects the various substances they encounter in their course during circulation have much more intimate relations with (or a greater affinity for) some than others. For example, in the lung, a special reciprocal action takes place between the corpuscles which are within the vessels and the air which is outside them. And, as if to facilitate this action, the coats of the blood vessels in the cells of the lung are reduced to an extreme degree of thinness.

Now, it may be argued of any other special organ, where the coats of the capillary vessels are reduced to a still greater degree of thinness than in the lung, that they are so for a similar purpose. Thus, in the brain, an organ very largely supplied with blood, the coats of the extreme vessels are so thin that we fail to trace them in all their various ramifications; indeed, so entirely are they altered that the elements of the organ have but a slight coherency. And, unless the contrary can be shown, we may infer this disappearance of the ordinary properties of the blood vessels to be for the purpose of removing all obstacle to the closest possible contact between the corpuscles of the blood and the parenchyma of the brain. This inference is corroborated by the fact that the brain is the organ specially affected by an abnormal circulation of venous corpuscles. That is to say, the brain is the organ which first detects the presence of an abnormal venous quality in the corpuscles.

If, then, we may regard the thinning away of the coats of the capillaries of the brain as facilitating a contact-action between the corpuscles of blood and the substance of the brain; and if, moreover, we are able to appeal to the known effect of venous corpuscles upon the functions of the brain denoted by drowsiness, stupor, delirium, and coma, as proof of a special action between the brain and the corpuscles, then we may claim the constant occurrence of similar cerebral disturbances in fever as corroborative of the view which bases phenomena of fever upon abnormal metamorphosis of the corpuscles of blood; the brain—to use a chemical phrase—being the test of the condition of the corpuscles.

All the functions of a living body may be comprehended as a series of actions and reactions; and, if it be admitted that the cor-

puscles of blood do perform a special function in the brain, there must necessarily be reaction from the brain upon the corpuscles.

Case.—A young married woman, aged 19, was delivered of her first child. The labor was natural, and she went on favorably until the fourth day from her confinement, when her husband staid out late at night, and returned home drunk from a fair, very much knocked about. By this she was thrown into a state of great nervous excitement. Very shortly after she was seized with a numbness of the legs and shivering, and then with pain in the head and wandering of the mind. The secretion of milk was interrupted; the skin became hot and dry; no sleep could be procured; and the pulse beat 120 in the minute. The wandering of the mind passed into furious delirium, and all the symptoms of fever and excitement continued for several days. It was only by judicious medical treatment and careful nursing that the disorder was subdued on the seventeenth day.

In this case, we argue that the fever arose, not immediately from the nervous shock, but from disorder of the blood-corpuscles; and, as our researches have led us to interpose distemperatures of the fluid of the blood between errors in diet and inflammation, and disorder of the corpuscles of blood between aërial miasms and fever, so analogously of mental emotions and nervous shocks, when they occasion or aggravate fever or inflammation, we conclude they do so by disordering, or adding to the disorder, of one or other, or both parts of the blood. Errors in diet do not produce inflammation, unless the fluid of the blood be distempered; also a miasmatous air does not produce fever, except the blood-corpuscles be affected; so too, great convulsions and loss of consciousness (in epilepsy, etc.,) pass away without fever, if the blood be not affected. The close sympathy between states of the corpuscles of blood and the brain, then, supports our proposition that symptoms of fever and the generation of poisons in the blood are to be based upon disorder of the corpuscles.

XIII. *Two Species of Fever.*—In the last lecture, we said that the corpuscles of the blood derive materials of their growth and nourishment from two sources, namely, the atmosphere and the plasma; and that their excretions are discharged in two ways—partly into the atmosphere, as carbonic acid, and partly into the plasma. It follows necessarily that the blood-corpuscles may be disordered in two ways; namely, by injurious matter in the air, and by injurious matter in the plasma. Wherefore, if fever be the expression of disorder in the corpuscles of the blood, we should expect—because they may be injured in two ways—two forms of fever. And there are two forms of fever, designated respectively contagious and hectic fever. Having discussed the phenomena of contagious fever, we have now to speak of hectic fever.

The corpuscles of the blood, in common with other cellular bodies, have within certain limits, a power of resistance against injurious agents. It is not every passing impurity of the atmosphere, nor every injurious change of quality of the plasma, that establishes symptoms of fever. Nevertheless, poisoning substances in the air

do, we know, occasion contagious fever; and we propose to show that a sufficient debasement of the qualities of the plasma, by disordering the corpuscles, will produce hectic fever.

In necrosis of bone, it has been shown for what purpose inflammation arises; and why it fails, or is hindered of cure. The persistence of the hindering cause—the dead bone—gives chronicity or permanence to suppuration, ulceration, and fistulous openings in the flesh. It is notorious in these cases, and in the analogous ones of diseased joints, that hectic fever, sooner or later appears; and the sooner, if the person with his permanent source of illness, (the chronic suppuration,) be also exposed to privations, hardships, or unwholesomeness of food. Again, inpulmonary consumption, where the blood is continually passing and repassing numerous places of suppuration, hectic fever appears. Numerous other examples might be given; but these are sufficient to show that protracted forms of inflammation—namely, chronic suppurations and ulcerations—are in some way, antecedents of hectic fever. Now, when inflammation, suppuration, and ulceration are hindered and protracted, spoiled material from the places of suppuration may ebb back by the roots of the veins into the plasma.

In proof of this, we may refer to the great work of Rokitansky, his *Pathological Anatomy;* and we shall quote the thirtieth experiment related in the third series of our own experimental researches.

"*Experiment* 30.—Select a small light colored frog, with as few pigment spots as possible, because these obscure what is going on in the vessels. Irritate the web of one of the feet by immersion in tepid water (97° Fahr.) for thirty seconds, and afterwards gently scratch it with the point of a needle, taking care not to wound or open any of the blood vessels. At the expiration of an hour or two, upon examining with a microscope, several of the capillaries and small veins will be seen crowded with colourless corpuscles. Now let a weak solution of potash—one part of the alkali to three of water—be lightly brushed over the web with a camel's hair pencil, immersing the foot in cold water immediately after. In blood vessels thus treated, we have seen red corpuscles glued together, and lumps of colorless matter passing away from the sphere of irritation, along the widening channels of the small veins Or these morbid matters, becoming stationary, have been the means of dividing the current of the blood into two streamlets within the vessels."

Such an experiment as this proves that local changes in the qualities of blood may be produced in places of irritation; and if in places of irritation, then also in places of inflammation and suppuration. And it shows, we think, in a satisfactory manner, how the mass of the plasma may become distempered by any continual ebbing back of spoiled material from places of protracted suppuration.

No one can doubt that the fluid of the blood is altered, and may be distempered, by unwholesomeness of diet, and by neglect of the daily excretions by the skin, bowels and kidneys. It is also evident that these common sources of distemperature of the fluid of the blood must operate not only in persons in health, but also in persons who may

be afflicted with chronic forms of inflammation, such as are present in necrosis of bone, in diseased joints, pulmonary consumption, etc. And if, in these last mentioned examples, distemperature of the fluid of the blood from errors in diet, or other such causes, concur with distemperature from absorption of spoiled matter from places of chronic suppuration, then there will be *deuteropathy of the plasma,* or disturbance of the qualities of the fluid of the blood from two points at the same time; namely, unwholesomeness of food and absorption of morbid matter. And it follows from the physiological relations subsisting between the corpuscles and the fluid of the blood, that an increasing debasement of the qualities of the fluid *must* at length disorder the corpuscles.

But one of the chief points we have been arguing for, is the therapeutical relations of inflammation to the fluid of the blood. We have said that suppuration is a means whereby injurious matter is eliminated from the plasma; that granulations and pus may perform the office of a depurating organ vicariously. Now we are saying that chronic suppuration and ulceration will occasion deuteropathy of the plasma and thereby fever. This seems an incongruity. A little consideration, however, will show that it is only seeming incongruity. Diet sustains life and health only by measure; it is pathological in excess and by deficiency. Heat or temperature contributes to life and health only by measure. Oxygen, an essential constituent of the atmosphere, is an element of health and life only by measure; any great variation from a mean amount is pathogenetic. Too much or too little would equally occasion disturbance of health.

So likewise, of the matters we are discussing; the process of repair in the commonest injuries has its pathological as well as its therapeutical aspects. The reaction upon which cure depends, may be too much, or too little, or too long about. Granulations may be languid, or indolent, or deficient; or they may luxuriate, and usurp the place of fibrous tissue when fibrous tissue is needed for reparation. And fibrous tissue may hold its ground when osseous tissue is demanded for cure. This is sometimes the case in fractured bones. In ordinary contusions, great swellings appear and disappear. In their appearance, matter from the plasma of the blood must have become stationary in the part. In their disappearance, this matter must have been absorbed again into the blood. There must be, therefore, in these cases, in some way or other, a ready passage for elements from the injured tissue into the fluid of the blood.

Analogously, inflammation, as a depurative reaction in distemperatures of the fluid of the blood, may be hindered and interfered with in various ways. There may be too much or too little of it; and certainly it is very often protracted by the persistence of the blood distempering causes. If, then, there be a ready passage—to and fro, as it were—between the fluid of the blood and the common tissue, it is not difficult to perceive that interference and hindrances may interrupt, or even reverse, the action in this particular

The ordinary process of repair, then, has a double aspect; and so, also, has inflammation. And our argument is, that protraction or chronicity in either of them introduces the liability to absorption of spoiled material, and that thus therapeutical reactions may operate retroversely and pathologically upon both parts of the blood; the fluid first, and then the corpuscles.

But, that we may give an outline of the argument as it relates to hectic fever, we take as examples necrosis of bone, gout and scurvy; and, in contrast with these, scarlet fever.

Necrosis of bone produces inflammation. There are hindrances to the removal of the dead bone; therefore, inflammation passes into protracted suppuration and ulceration. These gradually weaken the patient; they disable him from taking exercise; digestion is impaired; and the functions of the depurating organs are disturbed. This is one source of distemperature of the plasma. Distemperature of the plasma aggravates the existing inflammation; but the antecedent—the dead bone—cannot, in the case we are contemplating, be removed. Therefore disorder must proceed, until at length, from the places of suppuration, morbid matter ebbs back into the circulation; and the plasma, thereby thoroughly disordered, reacts upon and disorders the corpuscles, and hectic fever, more or less, appears. Upon this interpretation of the sequence of events between dead bone and fever, to cure the fever the blood-corpuscles must be relieved from their disorder; to relieve them, the qualities of the plasma must be improved; to amend the qualities of the plasma, the chronic suppuration must cease; and that chronic suppuration may cease, the dead bone must be taken away. We all know that the effectual removal of the dead bone will cure the fever.

Errors in diet by excess produce distemperature of the plasma. And if the depurating organs, or some of them, fail in removing the distemperature, inflammation arises. In gout, the patient is surrounded with every comfort. The error in diet is most probably one of excess; it can, therefore, be easily interdicted; the antecedent can be readily removed; and, by medicine, the depurating organs can be stimulated to a more active working. For these reasons, distemperature of the plasma is concluded to be simple; its qualities are disordered from manageable sources, which may be attacked and abolished before disorder is communicated to the corpuscles. Inflammation in gout, is, therefore, acute, and without fever.

On the other hand, in scurvy, the errors in diet are those of deficiency or unwholesomeness, and are much more difficult to deal with, especially where persons are crowded together in unhealthy localities, or limited to camps or ships. The individuals are poor, or, from other circumstances, cannot command the necessaries of life. Therefore, forms of inflammation, which in the rich are simple and acute, are here (or in the poor) chronic, and pass on to suppuration and ulceration, as in the sailors before mentioned, whose bare legs and feet were bitten by musquitoes; upon which example we

observed, that, because the unwholesome diet and confinement could not be changed, therefore the bitten parts passed into chronic ulcers. And if, in persons thus situated, with forms of chronic ulceration from continued unwholesomeness of diet, or other privations, morbid matter should be continually ebbing back into the circulation from places of chronic ulceration, the elements of fever, from a double debasement of the plasma, would exist; and fever thus arising, would obviously be different from fever arising through miasms in the air.

In scarlet fever, it is concluded, from premises which have been argued, that disorder of the blood begins not with the plasma, but in the corpuscles. The illness commences, not with forms of inflammation, but with symptoms of fever. There has been no error in diet; a miasmatous air has acted on the blood; a specific poison is generated; and the plasma is distempered posteriorly to disorder of the corpuscles. But (here as in smallpox) on natural depurating organ seems adapted for the removal of the poison of scarlet fever from the plasma; therefore, inflammation arises—that is to say, reactions between the plasma and the common tissue. The forms, amount, and duration of inflammation in scarlet fever, indicate the amount and severity of the disorder of the blood. Without these reactions, the patient would die from a poison shut up in the blood; with them, in their severest forms, there is a battling for life. When a joint has been crushed, death would take place from mortification, where there is no reaction; but, this established, the patient is saved from the first and most pressing danger, though afterward he has to pass the ordeal of inflammation, abscess, suppuration, ulceration, and very probably hectic fever too, as best he can, or suffer amputation for a chance of life. In scarlet fever, to cure the inflammation, the plasma must be freed from poisonous matter; and no more must enter it. That no more may enter it, the corpuscles must cease to generate and excrete a poison. Now, from the course observed in normal cases of an exanthematous fever, we may probably conclude that the corpuscles pass through their disorder in from four to six or eight days. When their disorder has passed, no more poisonous matter is discharged from them into the plasma; and, no more poisonous matter mingling with the plasma, the inflammatory reactions and the natural depurating organs together succeed in restoring the plasma to its natural state; whereupon the blood regaining its normal constitution, inflammation comes to an end, and the patient is cured. The pathological and therapeutical sequences are the same as in small pox.

In the midst of these therapeutical actions and reactions for the depuration of the blood in fever, it would seem that a depurating organ is sometimes coerced, as it were, to an increased and incongruous working; matter not naturally found in the secretion of the organ appearing in it at the crisis of the fever. In the performance of this enforced duty—the elimination of poisonous matter from the plasma—the parenchymatous elements of the organ may be overtasked and injured. Thus, in scarlet fever, the poison in the blood sometimes

occasions parenchymatous disease of the kidneys; and in such cases there is evidence also of inflammatory reactions in the common tissue of the organ. This complication may have the same reflex effect upon the blood as chronic ulcerations. Spoiled material from the overburthened kidneys may ebb back into the circulation, and a new blood distemper may be inaugurated from elements of urine retained in the plasma. Such being the case, there would be present the antecedent of a second or reactionary fever; namely, deuteropathy of the plasma—that is to say, distemperature—from disease of the kidneys, superposed upon the remnant of the poison of scarlet fever. And it is in perfect accordance with the argument that a secondary fever from disease of the kidneys should be more apt to appear as a consequent of the primary fever, where the inflammatory reactions in the skin are too slight or insufficient for the full and effectual discharge of the poison. But it is to be observed, that the second fever is not a relapse or reappearance of the first; it is another fever of different origin. The first fever was occasioned by an aerial miasm; the second is occasioned by a debasement of the plasma acting injuriously on the corpuscles of the blood.

Let us, in concluding this lecture, give a brief summary of the facts and of the arguments.

In necrosis of bone, the pathological series begins with dead bone. If this cannot be taken away, it ends with fever, from deuteropathy of the plasma disordering the corpuscles of the blood.

In pulmonary consumption, the pathological series begin with tubercles in the lung. There are hindrances and difficulties in their discharge; suppuration is made chronic; and the phenomena end with fever from deuteropathy of the plasma.

In scurvy, the series begins with unwholesomeness or deficiency in diet, or other privations which cannot be changed. Ulcerations arise; and the series may end with fever, from deuteropathy of the plasma.

In these examples—namely, hectic fevers—disorder of the blood corpuscles is posterior to a debasement of the fluid in which they swim; and forms of inflammation, protracted for longer or shorter periods, precede the fever.

On the other hand, in the contagious primary fevers, the pathological series begins with disorder of the corpuscles. It ends with forms of inflammation; because distemperature of the fluid of the blood is, in these fevers, posterior, to disorder of the corpuscles. Thus we interpret the relations of fever to inflammation, and of inflammation to fever, by the difference between the two parts of the blood. The facts are, that sometimes fever precedes inflammation, sometimes forms of inflammation precede fever; because sometimes (from aërial poisons) the corpuscles are disordered before the plasma; and sometimes (from unwholesome diet, privations, and chronic ulcerations) the plasma is disordered before the corpuscles. If you accept these interpretations, the whole subject of repair, inflammation, and fever, presents a coherency which is worthy of your attention.

Thus:—

Mechanical objects injure the common tissue; and the process of repair arises.

Errors in diet disorder the plasma; and inflammation appears.

Miasms in the air affect the corpuscles of blood; and primary fever is the result.

Both the process of repair and inflammation, from hindrances and difficulties, may pass into chronic or protracted forms of suppuration, ulceration, and discharges; whereupon, if spoiled material should enter the circulation, and, by reiteration or quantity, thoroughly debase the plasma, the corpuscles suffer, and fever appears; namely, reactionary, hectic, or a plasma fever.—*British Medical Journal,* May 14, 21, 28, 1859.

A Visit to the London Hospitals. By E. D. Fenner, M.D., of New Orleans.

My Dear B.—I arrived at this great metropolis on the 7th instant, after a very pleasant journey from the time I left home, and have been recently so busy seeing novelties and wonders, that I begin to feel tired of it, and must soon change the scene. Among the many and various interesting objects that have attracted my attention in London, I have not overlooked its great medical institutions, and I beg leave now to offer you the following crude observations upon such of the hospitals and distinguished medical men as I have seen. I must here acknowledge my obligation to our old friend and quondam fellow-citizen, Dr. G. T. Browning, for his very kind courtesy ever since I have been in the city.

ST. THOMAS' HOSPITAL.

June 13th.—Dr. Browning accompanied me to this venerable institution, which dates back to a beginning in the year 1213. It was first an almshouse, but in 1552 was endowed and incorporated by King Edward VI., whose statue now stands in the yard, and was erected in 1737. It looks like the statue of a boy of sixteen years. In the front yard is a statue of Sir Thomas Knight, erected in 1714, one of the earliest and greatest benefactors of this institution. We walked through wards, consisting of very large rooms, with beds on each side. Everything looked very neat and comfortable. The head nurses are very intelligent women, who have very nice apartments, and receive good wages. There is a Magdalen ward for venereal diseases; only seven or eight cases in at present. The general wards were not full. The operating room is extremely small, plain, and antiquated. We followed some students into the lecture room, and sat down to hear a clinical lecture by Dr. Barker. There were only four students present when he began, but ten more came in afterwards. He commenced a slow sort of Presbyterian style of reading reports of cases, with minute detail of symptoms, and hardly

ever looking up at his audience, which soon produced such a soporific effect on me, that I thought it best to retire, and we did so, I think, without his observing us. I was unable to procure any report of this hospital.

WESTMINISTER HOSPITAL.

Operating Day.—Tuesday, June 14th, 1859.—My friend, Dr. Browning, failing to meet me at twelve o'clock, I determined to go to the hospital without a conductor. On entering, saw a young man who told me there was no impropriety, and showed me the way to the operating room. At the door we met Mr. Holt, one of the surgeons, to whom I introduced myself, and received a polite invitation to accompany him and take a seat near by. There were two other surgeons present, Mr. Brooks and Mr. Morehouse, who belonged to the hospital and had operations to perform.

Operation 1.—*Removal of a small fibrous tumor* from the breast of a young woman. She was put under chloroform, and the tumor soon removed, with a considerable portion of the mammary gland. Two or three small arteries were tied, and the wound sewed up with *silver* sutures.

Operation 2.—*Lithotrity* in a man who had suffered from severe stricture of the urethra, and also stone in the bladder. The stricture had first been relieved, and then the stone was crushed. He had undergone the operation twice before this. He was put under chloroform, and with some difficulty a piece of the remaining stone was found and crushed. Mr. Holt said that he now only performed lithotomy when lithotrity was forbidden by some peculiarity in the case.

Operation 3.—*Stricture in the urethra.*—Man, aged about thirty-five, and rather weak in the lungs. On this account, Mr. Holt would not use chloroform. He used an instrument for *tearing* open the stricture. It was quickly done, and the pain only momentary. Mr. H has a steady hand, and is a nice operator.

Mr. Brooke now took the stand.

Operation 1.—*Removal of external piles* from a woman. She was put under chloroform, and it was done with scissors.

Operation 2.—*Hydrocele.*—In a man for a third time; a simple puncture with a trocar; no injection afterwards. Mr. B. said it was hardly necessary. Patient's penis had been amputated previously.

Mr. Holthouse, the third surgeon, then took the stand, and had nothing but one operation on the eye of a blind man. He removed a portion of the *lens*, but said it would not do much good.

I walked through the wards of the hospital, and found everything neat and comfortable. The operating room and lecture room both very small. There is a school now connected with this hospital, not chartered to confer degrees, but authorized to send applicants to the university as candidates. This hospital has 175 beds, and affords relief to about 2,000 in-patients, and 20,000 out-patients annually.

MIDDLESEX HOSPITAL.

June 15.—Dr. Browning accompanied me to this hospital at twelve o'clock, being operating day. Found nothing on hand; walked through the wards, and found the usual arrangement of large wards, with about twenty beds in each; low, iron bedsteads, and no curtains, divided into male and female, medical and surgical wards. The amphitheatre, operating or lecture room small, and very plain. Dissecting room small and very plain; on the ground floor of a back building, only one long table, suitable for six or seven subjects. In this building are also the apothecary and chemical rooms. Number of patients about 150. It is a fine hospital. Large number of outpatients, as in the previous.

ST. MARY'S HOSPITAL.

June 15.—This is one of the new hospitals; a fine, large building; large wards, with very high ceiling. I got the last published report, which was for 1857. The number of in-patients for that year was 1,480; out-patients 4,026; average number of in-patients, 143.

Operating Day.—Mr. Coulson, surgeon—a good-looking man, with a smiling countenance, apparently about fifty-five years of age; gray hair.

Operation 1.—*Removal of a small cheloid tumor* from the top of the sternum of a young woman—a simple thing, and soon over. She was put under chloroform.

Operation 2.—*Removal of a large morbid growth,* involving the right labium pudendi. He didn't seem to have any very definite idea about it, but cut out a considerable portion of it. She was under chloroform. In both these operations Mr. Coulson used the silk ligature. These were all the operations he had. The operating room or amphitheatre is larger and neater than any I have yet seen.

GUY'S HOSPITAL.

June 17th.—I took breakfast early and got to this celebrated old hospital about nine o'clock, with no other guide than a letter from my friend, Dr. Crawcour, to Dr. Odling, professor of practical chemistry in the medical school. I found a lecture going on by Dr. Oldham, addressing about thirty students in a very fluent and animated style on *deformities of the pelvis.* He is a good looking man, and is one of the professors of midwifery. The lecture being clinical, he entered fully into the propriety and method of premature delivery. At the close of the lecture we all followed him into one of the wards, and saw him perform the operation.

He did it with a long trocar, and very soon drew off about eight ounces of the liquor amnii. He then examined a new case that had just entered the ward—an intelligent looking-nervous young woman, with a countenance expressive of much anxiety and suffering. The doctor questioned her minutely relative to the previous history of the case, and then examined by the touch. He almost immediately shook his head, and said aloud to the closely-packed students around,

"*Malignant disease to great extent.*" No sooner had he said this, than the poor womon's countenance, which had been lit up with anxious hope, suddenly sunk, and she began to sob most bitterly, as if fully conscious that her doom was sealed. I could not but remember how often the French physicians and surgeons had been condemned for doing this very thing. If he had not pronounced the diagnosis in her hearing, it would have answered just as well, and the poor woman might have enjoyed the *delusion of hope* for some time, which would certainly be preferable to the pang of despair.

I then went into the labratory, and found Dr. Odling lecturing and demonstrating practical chemistry. Dr. O. is a very handsome and youthful-looking man, a fluent talker, and expert manipulator, He was a classmate of our Prof. Crawcour, and seems to be equally enthusiastic in his branch. At the close of his lecture he greeted me very cordially, and carried me through all the departments of this great hospital. The buildings cover a very large space of ground, and are well arranged into medical, surgical and maternity wards, laboratory, dispensary, pharmaceutical, dissecting and lecture rooms, museum and library. The house makes up about 500 beds; the in-patients average 500 constantly, and 5,000 a year. The *out*-patients number about 40,000 a year. All these London hospitals appear to have dispensaries attached to them. The museum at Guy's is very fine, (15,000 specimens,) and the library has eight or ten thousand volumes. The lecture-room would seat about 200. At this hospital is a bronze statue of Thomas Guy, its sole founder, in 1821, and a beautiful marble statue of Sir Astley Cooper.

From this I went to *University College Hospital*, with a note of introduction to Dr. Jenner. I found him busily engaged prescribing for *out*-patients. I sent him my note, and was soon invited to enter. I took a seat, and saw him examine a considerable number of patients, men, women and children. There was one case of intermittent fever, quite a rarity in these parts. Dr. J. examined the patients with great care before prescribing. All the children had to be stripped naked. He does not attend wards at this time.

Dr. Jenner is a nice, tidy-looking gentleman; hair black and very thin on the top of his head; of rather low stature, but stout; looks Scotch, but says he is English, and not related to Edward Jenner, of vaccine celebrity. After finishing his services, he kindly took me through the wards of the hospital, and also the university building adjoining. As we went along we passed Dr. Parkes, and on my telling him that he, Dr. Parkes, and Dr. Watson, were the men, of all in London, I had most desired to see, he introduced me to Dr. Parkes, whom I found to be a very fine looking and affable gentlemen. I took occasion to mention Dr. H. F. Campbell's report "*On the Nervous System in Febrile Disease,*" and said I would send him a copy if they would review it in one of the London Journals, which they promised to do. They gave me their cards and invited me to call. I found everything about this hospital in nice order. There are generally from 150 to 200 patients in the wards, and a large number of out-patients apply twice a week for advice and medicines.

Having, through the kindness of Dr. Odling, obtained a ticket to the *Royal Institution of Great Britain,* I went at 9 p. m. to hear a lecture by Mr. Faraday, one of the most distinguished philosphers of the day. When I applied, the secretary said he could not refuse me a ticket, but that I might congratulate myself on being an American, as there was hardly any other to whom he would grant the favor, and being the last lecture of the season, the house would be very full. I presume he was influenced somewhat by the fact that this great institution, the first of the kind in London, was founded in 1799 by a few men, among whom was our distinguished countryman, Count Rumford. It was here that Sir Humphrey Davy delivered his celebrated lectures, and announced his great discoveries in chemistry and electricity, which have immortalized his name and conferred honor on the institution. He was followed by Mr. W. T. Brande, and then came Mr. Faraday, who, full of years and honors, still charms and delights the distinguished audiences that always attend his lectures. On this occasion the lecture-room was crowded with the very *élite* of the city, among whom were many noblemen and ladies. The subject was *phosphorescent light.* Mr. Faraday is a very good looking man, with a profusion of gray hair, fine eyes and ruddy complexion. He is upward of sixty years of age, but quite active, and one of the most expert and successful experimenters I ever saw. He is very fluent, and speaks rapidly, as if anxious to communicate as much knowledge as possible in the time allowed. His experiments were beautiful, and he was listened to with profound attention. He lectured about an hour and a quarter, and I did indeed congratulate myself on having the happiness to see and hear so great a philosopher. This is a splendid institution, having a fine museum, and a select library of 30,000 volumes.

I here closed my observations for the day ; went back to Morley's, jotted down my memoranda, and retired to rest pretty late.

ST. BARTHOLEMEW'S HOSPITAL.

June 18th.—I went to this ancient and celebrated institution about noon. This was the theatre of Mr. Abernethy's great deeds and quaint humor, and is decorated with a fine marble bust and portrait of him. St. Bartholemew's was founded in 1102, and is, I believe, the oldest of all the London hospitals. It receives within its walls nearly 6,000 in-patients annually, and its out-patients and casualities amount to nearly 90,000 annually. It contains 650 beds, of which 420 are allotted to surgical cases, and 230 to medical cases and the diseases of women. The museums of anatomy, materia medica, and botany are extensive, and open daily to students. The library contains upwards of 5,000 volumes of standard works, also the chief medical journals. A reading-room is open to students of the school, during the greater part of the day. Among the medical and surgical staff are some names well known in our country, as the venerable Sir Wm. Lawrence, Mr. Stanley, Mr. Skey, Mr. Paget, Dr. Burrows, Dr. West, and Dr. Farre. On entering, I was conducted to the room where Mr. Paget was prescribing for surgical out-patients. I sent

him my card, and he welcomed me cordially. He dispatched thirty or forty patients in a very short time, and then having a pressing engagement, he asked his assistant to conduct me to the operating-room and wards. It was operating day, and Mr. Stanley now drove up. He saluted me politely, and asked me to walk in and see what was to be done. Mr. S. is rather short and stout, with gray hair and a good face. Having learned from my conductor that there was very little to be done here to-day, I concluded to go at once to King's College Hospital, where there was a prospect of seeing a number of operations.

KING'S COLLEGE HOSPITAL.

When I arrived I found about a hundred spectators in the amphitheatre, and the distinguished surgeon, Mr. Ferguson, commenting on a case upon which he had just operated. Mr. Ferguson looks to be about fifty years of age, robust, well formed, rather bald, and a very cool, self-possessed air. He speaks very deliberately, and not without the disagreeable appearance of affectation. But he is as cool and deliberate in operating as he is in speaking. I witnessed the following:

Operation 1.—*Lithotrity* on an a man: third time. The patient was put profoundly under chloroform, and Mr. F. proceeded to extract about a dozen fragments of stone from the bladder. From the manner with which these rugged fragments were dragged through the urethra, I shall certainly not envy this patient the pleasure he will have in emptying his bladder for the next day or two. He was on the table nearly an hour.

Operation 2.—*Amputation of the thigh*.—This was a case of *ununited fracture,* which had resisted all the means resorted to for the purpose of producing bony union. Mr. Ferguson removed the limb with the knife alone, and then sawed off a considerable portion of the bone. After tying the arteries, he closed the stump with silk sutures, and it looked very neat. It was done under chloroform. After the operation was over, he drew from the lower fragment a long ivory peg that had been driven into the bone to cause reunion. Mr. F. did not mention any other means that had been resorted to in this case. I could not but suspect that this poor fellow had lost a leg for the want of skillful surgery.

Mr. Bowman now took the stand, and operated on a young woman for a deformity of the upper lip. It was very tedious, and her beauty was certainly not improved at the close of the operation, though it may be ultimately. Mr. B. is a tall, thin, handsome man, with an intellectual countenance, and apparently about forty. His remarks on the case were very interesting.

Mr Wood, assistant surgeon, now took the stand, and operated for the permanent cure of reducible hernia on a young man. He took occasion to condemn Wurtzer's operation, and then performed *his own*, which, from the little I saw and heard of it, I am unable to describe so as to make you understand.

Dr. Watson holds the honorary position of consulting physician to this hospital, but does not attend wards. Dr. Budd, his successor, is in service, but I have not had the pleasure of seeing him.

LONDON FEVER HOSPITAL.

June 23d.—This morning my ever kind friend, Dr. Browning, conducted me to this institution. Having seen very few cases of fever in any of the hospitals I have visited; I felt a strong desire to see one specially devoted to this class of disease, which, as you are aware, is the most important of all in our part of the world.

The London fever hospital is rather small, (only about 200 beds), situated in a high and airy place, and most admirably arranged for ventilation and cleanliness. The visiting physicians are Alexander Tweedie and Southwood Smith; assisting physicians, Wm. Jenner and C. Murchison; resident medical officer, Dr. J. D. Scurrah. The latter received us, and very politely conducted us through the entire establishment. Neither of the visiting physicians was present, which I regretted, as the name of Tweedie and Southwood Smith have long been familiar to us as writers on fever. They are now old men, and rather behind the new lights of the day.

Dr. Scurrah gave me the annual report for 1858, from which it appears there has been a marked decline in the prevalence of fever in the last year or two. Some other diseases besides fever, amounting to more than one-third of the whole, are admitted into this hospital. The admissions for fever last year were 357, viz: typhus 15, typhoid 180, febricula 44, scarlatina 118. Deaths from fever 59, viz: typhus 9, typhoid 28, scarlet 22. This shows a mortality from fevers of more than 16 per cent., which certainly does not reflect much credit upon the fever doctors of the great metropolis, especially when we consider that every possible convenience and advantage are here supplied. The only drawback is, that some of the cases are admittd in advanced stages of disease, a thing that occurs at all hospitals. The largest admissions occur in September; the smallest in February. Daily average throughout the year, thirty-eight.

The mortality from typhus fever was upward of 50 per cent., from typhoid 13.72 per cent., and of scarlet fever 19 per cent. Now I would ask whether any respectable practitioner of seven years' experience in any city, town or neighborhood, in our Southern country would ever boast of such success as this in the treatment of fever? Dr. Scurrah says they do not pretend to *cure* fevers at this hospital, but rather to guide them as safely as possible through their natural course. The treatment consists of wine, nourishing broths, sometimes camphor mixture, and astringents when there is diarrhœa.

It is evident that fevers at this day constitute but a small portion of the diseases requiring medical aid in London, so different from the state of things in the days of Sydenham. And this is unquestionably due to the wonderful improvement that has taken place in sanitary measures. In the three weeks I have spent in London, I have traversed it in almost every direction, and I must say it is the

cleanest city I ever saw. The only place I have seen that could be compared to even Common Street, our great thoroughfare, was around the great fish market of Billingsgate, and even this comparison would be decidedly in favor of the latter. London was once as sickly as New Orleans, but is now one of the healthiest cities in the world; and this is entirely due to her admirable sanitary measures. If our own ill-fated city would only follow her example, there is no telling what great benefits would accrue. I have obtained some valuable reports from the General Board of Health, which I shall bring home with me.

The hospitals named are all I have found time to visit during my sojourn in London, though there are five or six others of high standing. Nearly all of the great hospitals have medical schools attached, and afford fine facilities for instruction. In these schools studens are prepared for examination before the royal colleges of surgeons and physicians, which confer the highest degrees upon the successful candidates.

The amount of charity extended to the afflicted poor of London is almost beyond calculation, and reflects great honor upon the liberality of her wealthy citizens. All the great hospitals are free to the poor; but besides these there are eighty-eight free dispensaries, and other medical institutions of various kinds, devoted entirely to the relief of the poor. From the Medical Directory I learn that in only twenty-one of these institutions the average number of patients for a single year was upward of *one hundred and ninety thousand.* In a single one—the Metropolitan free hospital—the average number of patients was fifty thousand. Many other instances might be given of extraordinary charity and benevolence to the poor. It really appears to me that the poor of this great city are the favorite *pets* of the rich, who bestow on them every imaginable care and comfort.

But I find my letter is getting entirely too long, and lest I should weary the patience of yourself and readers, I will here conclude, with the promise to let you hear from me again, after I shall have visited some of the other seats of medical science in this part of the world. I start to Edinburgh to-morrow, thence to Dublin, and after that to Paris, where I shall probably write again.

I remain, very truly yours,

E. D. Fenner.

London, June 25, 1859.

[*N. O. Med. News and Hosp. Gaz.*

Mortality.

Life and Labor.—The Sanitary Review for January has an article on the influence of various common occupations on health and life. The effects of sand paper making are illustrated as giving rise in the young to a modified phthisis, which is sometimes rapidly fatal. Walking stick making and hemp and flax dressing are described as

exciting bronchitis and bronchorrœa. The Neapolitan hemp has also the peculiar property of producing a spasmodic paroxysmal attack like that produced by drying hay and by ipecachuana. Trimming manufacturers' work leads to bronchial mischief. Fur dyeing, by exposing the artisans to the fumes of nitrous acid and to the dust arising from dried sulphate of copper, specially leads to a number of serious evils, affecting the teeth, the digestion, and (worst of all) the organs of respiration. Cigar and snuff making, in the first instance, give rise to the peculiar toxical effects of tobacco, and afterwards to chest disorder, ending in chronic bronchial flux and inanition. The writer of this paper suggests that a parliamentary committee of enquiry should be organized to enquire into the subject of occupations and health. He concludes as follows:

"When we look at diseases as a whole, we stand amazed at the varieties of type which they assume. When we classify them into groups according to their causes, we stand equally amazed at finding to how very few groups all diseases may be reduced. We find all the disease causes out of the body and clothed in externals. Resolving the causes, there stand out some dozen poisons of communicable and reproductive power, improper dietary, variations of atmosphere, and occupations. Of all these, the last stands most invitingly for enquiry. The enquiry is of a kind to which the most rigid rules are applicable. Its results might be demonstrations, its suggested remedies simple certainties."—*Sanitary Review—Br. and For. Med. Chir. Rev.*

Mortality of England in 1856.—Of 390,506 deaths in the year, the causes were not specified at all in 4,666 cases, and 3,474 are simply tabulated as sudden deaths, all inquiries having failed to elicit further definite information. 94,407 of the whole number of deaths were those of infants under one year old.

The causes of death are arranged in a few classes with numerous subdivisions. 78,047 of the deaths are classified as zymotic diseases: typhus (15,398), scarlatina (14,160), and diarrhœa (13,815), proving fatal in 43,373 instances, or considerably more than one-half of the whole number due to this class. Hooping-cough, measles and croup stand next in order. Small-pox, formerly so fatal, was the cause of death in 2,277 cases.

Of the class of diseases denominated "constitutional," 82,856 persons died. Phthisis (consumption) stands sadly pre-eminent in this list, its victims numbering 48,950 persons, by far the greater proportion of whom were young women. "How many of the thousands of deaths are to be ascribed severally to the fatal stays and to the indoor life of women, etc., it is not easy to calculate. Air is the pabulum of life, and the effects of a tight cord round the neck, and of tight lacing round the waist, differ only in degree in the time of their manifestation and in some of their symptoms; for the strangulations are both fatal. To wear tight laced stays is, in many cases, to wither, to waste, and to die, and is perhaps the natural chastisement of the folly which inflicts this Chinese deformity,

natural only to wasps and other insects, on the human figure." The tubercular diseases carried off in all 63,832 persons.

The "local diseases," as inflammations, the allied pathological phenomena or their results, and functional diseases of particular organs, proved fatal to 149,911 persons. 50,535 of these died of diseases of the brain and nervous system, including also 23,946 deaths by convulsions. 13,672 deaths were referred to diseases of the organs of circulation. Diseases of the respiratory organs proved fatal to 52,908 persons, 21,528 of whom died from bronchitis, and 22,653 by pneumonia. These diseases, and all others of the class, were less fatal than in the previous year. 22,620 persons died frsm diseases of the digestive organs. The other causes of death under this heading are numerous, but the cases are few in each.—*Condensed from the Registrar General's Annual Report.*

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

A Practical Treatise on Enteric Fever—its Diagnosis and Treatment—being an analysis of one hundred and thirty consecutive cases derived from private practice, and embracing a partial history of the disease in Virginia. By JAMES E. REEVES, M.D. Philadelphia: J. B. Lippincott & Co., 1859. pp. 199.

We are told by the author that the volume before us is an enlarged account of the cases of *Enteric Fever* reported in 1856, for the Buffalo Medical Journal. He has been induced, by the suggestion of physicians, to give his observations this more permanent form. It is rather a new feature in Medical literature for a "country practitioner" to publish a book. Books emanate mostly from professors and those having the charge of hospitals.

We are not sure but that the example before us may prove profitable in several ways. Why may it not stir up the country physicians to a more thorough sense of their duty—to the propriety of making a record of important cases? Their own literary status would, by such a course, be increased, to say the least, while the professional stock could not fail to receive additions. Besides, what would contribute more than such a course to the interest of societies, that now too often flourish only during the time of forming constitutions, enacting by-laws, etc., etc.

If physicians who practice in the interior were more in the habit of placing their observations in a permanent form, we should soon have the material for a more perfect knowledge of epidemics and endemics. As the custom now is, our descriptions too often are only good for an epidemic as it has made its appearance in a city with a crowded population, or in hospitals where important modifying influences are always present. To comprehend, for example, typhoid fever, to see its essential pathological elements, we need just such descriptions as are found in the work before us, and it will only be when the physicians in every region where the disease has prevailed shall have given accurate accounts of it, that we will have any thing in our literature worth preserving. The disease, as it breaks out in rural districts, is a very different something from what it usually is in cities, hospitals, or ships. In rural districts, it is most likely to exhibit simply its own essential elements; in cities, hospitals, etc., it is usually complicated with the influences of some variety of "*crowd poison.*"

Following the example of Wood, the author denominates the disease "*Enteric Fever.*" In a previous No. of the Journal, when noticing the Treatise of Dickson, we called attention to the impropriety of this innovation. The disease, which it is the object of the volume before us to set forth, is not one simply of the alimentary canal, as the name preferred by Wood and Dickson would seem to indicate. It is made up of a series of lesions due to an *epidemic typhous* constitution which, according to medical historians, has prevailed over our country at different periods from Hudson's Bay to the Gulf of Mexico. The disease, to which the condition of the atmosphere has given rise, has received different names, according as one organ, or another, seemed to be affected. As a pestilential malignant epidemic, it had an existence in New England, along the Connecticut river, as early as March, 1806. It prevailed nearly at the same time in Massachusetts. From its symptoms we learn that its ruling tendency was that of *early prostration.* Patients were very soon in a stupefied state, and it was not uncommon for them to die in twenty-four, or forty-eight hours after the more grave symptoms were manifested. During the years of 1810, '11, '12, the disease spread west and south. We are told that it reached the banks of the Ohio in 1814. It had then, however, associated with it an additional pathological element. Besides the general tendency to prostration, there was pneumonia in many cases. This secured

for the disease the name of *Pneumonia Typhoides.* Until 1820 this "typhus atmospheric constitution" prevailed in very many localities throughout the west and south. Dr. Hildreth, of Marietta, O., and Dr. Huestis, of New Orleans, allude to it, and both speak of its influence on the autumnal fevers in their respective localities.

The years of 1821, '2, '3, will long be remembered by the inhabitants of the Mississippi valley, on account of the sickness that every where, from Canada to New Orleans, prevailed. The epidemic reached its highest degree of malignity in '22. Although this epidemic was *bilious* in character, it will nevertheless be seen, by those who are curious enough to look into its antecedents, that it was preceded by a tendency of cases, to assume the typhoid type. During also the prevalence of the epidemic, many cases passed at a very early period of the course into the typhoid stage.

Such facts go to show that what we now have in our country as continued fever, and to which we apply pretty generally the name "typhoid," is no new form of disease. We can indeed trace its recognition back to the first dawn of medical history. It has had many names in ancient, as well as modern times. Looked upon as "*idiopathic*" by certain physicians, it received names founded upon the presence of certain symptoms regarded as being constant; while regarded by others as being the effect of an inflammatory process of some organ or apparatus, it has received names expressive of that circumstance. From the constancy of prostration, and putrid adynamic tendencies, the disease had anciently applied to it the adjectives Low, (Hippocrates), Putrid, (Sanctorius), Putrid Malignant, (Riverius), Pestilential, (Sydenham), Malignant, (Bellini), Continued Putrid, (Boerhaave), Petechial, (Francastorius), Spotted, (Brooks), Typhus, (Cullen, Thomas, Armstrong). By those on the contrary who look upon the disease as *symptomatic,* it has been styled Brain fever, (Clutterbuck), Mucous fever, (Hildebrand), Gastro Enteritis, (Broussais), Mesenteric fever, (Baglivi), Typhoid Affection, (Louis).

From this brief review of the nomenclature of the disease, we can see how many and how various the attempts have been to fix upon a name. The writer before us may notice that each author named the disease according to what seemed to him at the time to be the leading feature. Hippocrates was impressed with the idea that the ruling tendency of the movements of the whole organism was *low,*

below the normal standard, hence the name he adopted. Some modification of the idea of Hippocrates has obtained, to a greater or less extent, until the present time. There is scarcely, indeed, a writer of ancient or modern times, but what in his descriptions alludes to the fact that the vital properties of the organism are sooner or later, in the course of the complaint, "*stupefied.*" This being so general a characteristic, it has secured permanently for the disease the name *typhus* or *typhoid.*

It may also be observed that the attempt by Wood and others, to name the disease from anatomical lesions is not new. It is as old as pathological anatomy. The wonder is, however, that these authors should have exhibited such a lack of judgment in calling the disease "*Enteric*" fever, the intestines being but the occasional seat of the disease.

The views expressed in the work before us on *treatment,* are in the general very judicious. If we were to find fault with them it would be because of "officiousness." Too great a variety of drugs are suggested as being useful. We are of the opinion that the disease, like small pox, will run a definite course in spite of any thing in the way of medication, and that it matters not what are the surrounding circumstances, or the physical powers of the patient, the tendency of the vital properties of the organism is downward; debility and stupefaction are always in the category of events, and require to be provided for. As a consequence, drugs addressed to these tendencies, or states, are indicated to the exclusion of everything else, except as mere palliatives.

The author suggests, without sufficient qualification, the utility of blood letting. We simply think the remedy contraindicated by the pathology. The same may be remarked of *veratrum viride.* Unless it can be shown to have some other effect than that of lessening the action of the heart, we regard it as not only unnecessary but injurious.

It is very much to be regretted that our knowledge of the therapeutics of typhoid fever continues to be so purely negative. We know something of palliatives, but nothing of any article capable at once of taking "*the bull by the horns.*"

In conclusion, we express our mind with great pleasure that Dr. Reeves has acted well his part. His contribution to our literature of Fever is a very creditable one, and deserves imitation.

Anatomy, Descriptive and Surgical. By HENRY GRAY, F. R. S. Lecturer on Anatomy at St. George's Hospital. The drawings by H. V. CARTER, M. D., late Demonstrator of Anatomy at St. George's Hospital. The Dissections jointly by the Author and Dr. Carter. Three hundred and sixty-three Engravings on Wood. Philadelphia: Blanchard & Lea, 1859. pp. 754 8vo.

It might seem that new works on anatomy were unnecessary. Why did not Vesalius, who has the credit of being the first European who cultivated the science, say all that was necessary on the subject? He doubtless told all he knew, and why not be satisfied? By some means or other a notion got out that the great father had not told all; that something was still lacking. This idea operated on Fallopius, Haller, Meckel, on the Hunters, on the Bells, on Bichat, on Wistar—not to mention others quite as much distinguished—and hence the many attempts to tell us all there is. The task, it seems, has not yet been performed. A great addition has been made to the stock collected by Vesalius; still the subject is far from being exhausted. There have been few observations of late entitled to the name of discoveries. No new bones have been found, but occasionally a new muscle, vessel, or tissue is pointed out. The microscope has informed us of the existence of such countless numbers of blood vessels and nerves that we have no expectation that an attempt will ever be made to extend nomenclature to them A vessel, the caliber of which admits but a single corpuscle at a time, may not at present seem to our gross nature to be of sufficient importance to merit a name and a description. Still we cannot tell what new tastes progress may develop. The individual relations of these minute vessels to ultimate cells concerned in nutrition, secretion, etc., may with some future generation become a grave subject of investigation. The bringing forward, however, of new matter is not the only reason that might be assigned for the appearance of new books on Anatomy. Important improvements have been made in the method of teaching the subject, and it is here that the work before us claims notice

The author has evidently devoted much time to osteology as the basis of anatomical knowledge, for he has taken great pains to give the most minute markings of each bone, and has indicated, by dot-

ted lines, after Holden's plan, the attachment of muscles; the articulations are also shown on a new plan.

What more than anything else constitutes the leading feature of the work, is, the attempt to make it eminently practical. The author, as a consequence, has introduced much in the way of *Surgical* and *Regional* Anatomy. But this is not all. He has called attention to treatment: if a fractured bone, for example, the character of the displacement is given, and the most approved modes of remedying it. We insert the following as a specimen:

"Fracture of *the lower end of the radius* is usually called Colles fracture, from the name of the eminent Dublin surgeon, who accurately described it. It usually arises from the patient falling from a hight and alighting upon the hand, which receives the entire weight of the body. The fracture usually takes place from half an inch to an inch above the articular surface, if it occurs in the adult, but in the child before the age of sixteen, it is more frequently a separation of the epiphysis from the diaphysis. * * * This fracture may be distinguished from dislocation, by the deformity being removed on making sufficient extension, when crepitus may be occasionally detected; at the same time an extension being discontinued, the parts immediately resume their deformed appearance. The age of the patient will often assist in determining whether the injury is fracture or separation of epiphysis. The *treatment* consists in flexing the fore arm and making powerful extension from the wrist and elbow, depressing at the same time the radial side of the hand and retaining the parts in this position by well padded *pistol-shaped* splints."

Here we have descriptive and surgical anatomy and *treatment,* not only in the same book and chapter, but in the same paragraph.

We know that every work on *Descriptive* anatomy, is a work also on *Surgical* anatomy. The very description of an artery shows, at once, its relation to other parts, and hence may be inquired, the necessity for special works on surgical anatomy. All that we have to say in reply to such questions, is that we have always thought the best medical scholars were made by connecting *discription* with utility. If at the time a teacher is passing over the dry details of a bone, he does not even hint at the practical application of his remarks, he will receive but little attention from his class. We are all eminently utilitarian, and when a subject can be made to assume this aspect, attention is involuntary. The student likes to hear what

he can turn to practical account, and our notion agrees with that of the author, that throwing in a remark now and then on the *uses* of the information we are communicating, "*pays*" in a number of ways.

Besides what is found in the text on Surgical Anatomy, a number of pages in the back part of the volume is exclusively devoted to Surgical Anatomy of Inguinal Hernia, of Femoral Hernia; Surgical Anatomy of Perineum and Ischio-rectal Region, etc., etc.

Taken all together, we look upon this work as being well calculated to cultivate a taste for the subject of which it treats. Unless a student becomes interested in Anatomy at the commencement of his career, he will most likely be a smatterer through life; and hence, a work like the one before us, that presents us with an improved method of teaching the subject, is a desideratum.

In concluding our notice of this work, we embrace the opportunity to remind the student that books and pictures on Anatomy are of secondary importance. A good knowledge of the subject can only be obtained by dissections, unfolding the leaves of a *cadaver*.

A Treatise on Gonorrhœa and Syphilis. By SILAS DURKEE, M.D., Boston: John P. Jewett & Co.

In the preface the author states as follows: "In the year 1854 the author of the following pages prepared an essay on 'The Constitutional Treatment of Syphilis,' which was honored by the award of a premium from the Boylston Prize Committee of Harvard University. That essay constitutes a large portion of the present volume; and though it has been modified to a degree that deprives it of its original identity, it is believed that its intrinsic merits have been materially enhanced."

Other duties forbid our giving this book more than a mere notice. It is a very fairly executed octavo of 442 pages, bound in cloth. The style is chaste and pleasing. So far as we have been able to peruse it, it contains abundant indications of diligence, experience and sound sense on the part of its author. The scope of the work is such as to make it quite complete. It is characterized by an obvious effort to avoid abstruse and theoretical points; the resources of the author being spent, as should be the case, in making full array of the facts bearing upon questions admitting of something like definite settlement. The work is accordingly, well adapted to the

wants of the great body of the profession, who though so situated, in reference to the diseases of which it treats, as to be obliged to treat them, and give professional opinions in reference to them, can, notwithstanding, hardly be expected to have more than limited experience, and consequently, are scarcely supposed to be interested in the unsettled and theoretical features of the subject.

Furthermore, as indicated in the quotation which we have made from the preface, this treatise is essentially a prize essay. Just think of it! A prize, perhaps of $100 is offered, and responded to with the book before us: a book in every way, and to all concerned, highly creditable.

We are gratified to note that this offering of prizes for meritorious essays is becoming quite prevalent. We are not acquainted with the arrangement under which this prize was awarded; but have satisfactory indication before us, that it was worthily bestowed. The Massachusetts State Medical Society, that of Connecticut, and the National Medical Association, have made provision for the annual distribution of prizes. The Illinois and Ohio State Societies have bestowed prizes in a few instances; and the latter now has a committee entrusted with the duty of preparing a plan for doing it annually. This is a step in the right direction. H.

The Science and Art of Surgery; being a Treatise on Surgical Injuries, Diseases and Operations. By JNO. ERICHSEN, Prof. of Surgery and Clinical Surgery in University College, and Surgeon to University College Hospital. An improved American edition from the second enlarged and carefully revised London edition. Illustrated by four hundred and seventeen engravings on wood. 8 vo. pp. 996. Philadelphia: Blanchard & Lea. (For sale by Riley & Co.)

It is only necessary to announce a *new edition* of this work. It seems to have taken a place in the libraries of most of the physicians throughout the country. While it makes no pretensions at giving the history of surgical science, or noting the successive steps by which the science has reached its present useful condition, it nevertheless presents a very practical outline of what is known at the present day, it having been the object of the author to make the work a guide to the practitioner, as well as a text book to the student.

In order to bring the work fully up to the times, the author has revised the present edition very carefully, and has also re-written some chapters.

Woman: Her Diseases and Remedies; A series of letters to his Class. By CHARLES D. MEIGS, M.D., Professor of Obstetrics, and the Diseases of Women and Children, in the Jefferson Medical College, Philadelphia. Fourth edition, revised and enlarged. Blanchard & Lea, 1859.

This work, on the appearance, from time to time, of its several editions, has already been sufficiently brought to the attention of our readers. This early appearance of its fourth edition, is, of course, a re-indorsement of it—the best any work can have.

The execution of the present edition corresponds very closely with former ones, and is such as will fully sustain the high reputation of the house from which it emanates. H.

Physicians' Visiting List for 1860.

We are in receipt, from the publishers, Lindsay & Blakiston, Philadelphia, of this little pocket volume, "The Physicians Visiting List, Diary, and Book of Engagements." The contents embrace, almanac, table of signs, Marshall Hall's ready method in asphyxia, poisons and their antidotes, table for calculating the periods of utero-gestation, and blank leaves for visiting list, memoranda, etc., etc. For sale at our book stores.

The Physician's Hand-Book of Practice for 1860. By WM. ELMER, M.D., and LOUIS ELLSBURGH, M.D. New York. W. A. Townsend, Publisher.

This is an enlargement on the Physician's Visiting List, as the caption above quoted indicates. As far as we have looked through the notes and suggestions relating to what the physician encounters in his daily round of practice, they are judicious. (For sale at our book stores.)

PART FOURTH.

EDITORIAL AND MISCELLANEOUS.

Mal-Practice.—We have been consulted lately in regard to a number of cases of alleged mal-practice. And were we to judge from the instances which have come to our knowledge, we should think the tendency to call in question the conduct of surgeons is on the increase. This certainly has not originated from the success connected with these prosecutions. In not one instance in twenty—as far as our observation extends—have they been successful. This is due to the circumstance that deformities, when they do occur, are, pretty constantly a *necessity, or the fault of the patient.* When the storm partly breaks off a sapling of the forest, although it may be straightened up, all the wisdom of the world is inadequate to the prevention of deformity and unnatural weakness Why, then, in the treatment of broken bones, etc., should surgeons be held responsible for "*perfect*" results? In all candor, we ask why?

Observation has convinced us that very much of what the physician or surgeon is blamed for, is due to the recklessness or want of obedience on the part of the patient or friends. The surgeon may do his duty—may do all that the best skill is capable of; but if he has not the cordial and faithful co-operation of the patient and nurse, he will be thwarted in his objects. This will be especially the case, should the patient reside at a distance.

As a consequence there is scarcely ever any merit in the cases of prosecution for mal-practice. The Judiciary is beginning to understand this, and hence the frequency with which the attempts to rob members of the profession fail.

If we were to call the attention of the profession to any thing having the appearance of error in it, it would be to the amount of attention usually given to surgical cases. As a general remark, this is not enough. We are all of us too much in the habit of making our visits at intervals that are too long apart. At the first visit, if it is a fracture, for example, the bones are adjusted and the dressing applied. Two or three days, and often a week, is allowed to pass without again seeing the patient. Or, per-

haps, directions are left, that if any thing uncommon occurs, the physician must have word. All this is wrong. A patient with even a simple fracture should be visited every day until the union of the bones has been completed. Better err on the side of giving too much, than too little attention.

THE WHITNEY CASE AGAIN.—Our readers will recall to mind the case of Whitney, of New York, treated with the probang, by Dr. Green, of probang notoriety. They will also recollect that Drs. Mott and Beales charged Dr. Green with mal-practice, and how the charges were discussed in the New York Academy of Medicine.

Dr. Green acquitted himself very fully before the Academy, and before the profession of the country. He, however, to have the charges made against him more thoroughly investigated, has forwarded the papers connected with the case to Bennet of Edinburgh, and Rokitansky of Vienna. Letters have been received from both of these gentlemen. Any one who reads these letters will not envy the connection which Mott and Beales have with the case. A thorough exposure, however, is just what these gentlemen richly merited. They acted from unworthy motives when they accused Dr. Green with having caused the death of Whitney. The reproof, therefore, contained in the letters alluded to, is, to our mind, in good taste.

We may as well also state, in this connection, that we are very far from indorsing the general use Dr. Green has made of the probang. It was a hobby with which he was intoxicated. He knew, doubtless as well as any one, "*how,*" but not "*when*" to use the instrument.

STARLING MEDICAL COLLEGE.—The Thirteenth Session of Starling Medical College has just been commenced. More students—one-third more—are in attendance now than at a corresponding period for several years past.

The Institution may now be presented to its alumni and many warm friends, with new claims for consideration. Since our last session, we have added many fine things to our museum, from France and Germany. These things embrace models in *wax* and

paste, of diseases of the eye, ear, and genital apparatus; a number of preparations showing the normal structure of the eye, ear, brain, vascular system, absorbent system, etc., etc. Besides, we have added largely to our osteological department. We have the Beauchene preparations of the head, face, foot, and hand; and also quite a number of skeletons of inferior animals, including specimens of all the vertebrata.

The Hospital arrangements are now very complete. The Penitentiary and County Infirmary furnish, indeed, as much material for clinical instruction as can be profitably used.

It is the design of the Faculty to keep the College in motion during the most of the year. A Spring Course will therefore be commenced about the 1st of April, and continue until the 1st of July. Students who are ambitious to make the most of themselves, will find it very much to their advantage to attend this course.

Books Received.—We have just received Habershon on the Alimentary Canal; Parrish's Practical Pharmacy; Flint on Diseases of the Heart; Bird on Urinary Deposits. These works, several of which are new, will be more formally noticed in the future.

Cleveland Medical Gazette.—We are in the receipt regularly of this journal, and it gives us great pleasure to state that it is in every way worthy of liberal patronage. Prof. Weber's ring is about right; and we heartily wish his enterprise success. He has now, as we see in the number before us, associated with him Alleyne Maynard, M.D., as assistant editor.

Prof. L. P. Yandell, so long connected with the schools of Lexington and Louisville, has removed to Memphis, Tennessee, where he takes the chair of Theory and Practice. Dr. Y. commenced his professorial career in the chair of Chemistry, at Lexington, Ky. He continued to teach this branch during his stay at that place, and for

a number of years after his removal to Louisville. He was afterwards transferred to the department of Materia Medica.

What Prof. Y. undertakes to do, he does well; and nothing could be more appropriate than that his gifts and learning, at this period of his life, should be brought to bear on the most difficult of all the departments of medical science. Indeed, the new school with which Prof. Y. has connected himself, may congratulate itself that it could not have placed its helm in more able hands.

Dr. Hamilton's Surgical Clinic at Starling Medical College. Reported by P. A. Willis, Med. Student.

Saturday, Oct. 23.—*Sarcocele*—The patient was a man aged 25 years, apparently of good general health. Eighteen months previously the disease appeared with enlargement and insensibility of the left testicle. Its growth was steady, involving the entire organ. It was now of very large size, distending the scrotum, pushing the right testicle, which was much atrophied, up to the abdominal ring.

The case was diagnosed as probably simple sarcocele. Prof. H. declined to undertake any treatment other than to extirpate the diseased organ. This was accordingly done by a free incision from the external abdominal ring over the spermatic cord and testicle. After the latter part was dissected out, on account of the very short condition of the cord, it was transfixed with a needle armed with a ligature. The cord was thus controlled till the ligatures, three in number, were applied. The dressings were completed with three or four interrupted sutures in the upper part of the wound—wet lint, and suspensory bag.

On the third day the patient spent some time in riding; on the seventh day he left for his home in a distant part of the State, feeling "that at least twenty years were added to his life."

The testicle was near a pound in weight. It had been tapped several times recently, from the supposition of its being a hydrocele. One of these tappings was attended, at once, with such obvious and permanent increase of its size, as to lead to the supposition that hemorrhage was produced in the interior of the organ. In the centre of the testicle, accordingly, a coagulum was found, near the size of the yolk of a hen's egg. The testicle was thoroughly disorganized,

not containing a vestige of its original structure, interior to the tunica vaginalis.

Prolapsus Ani.—The patient was a very strong healthy child, aged three years. No obvious cause for the disease could be detected, except what appeared to be a relaxed condition of the parts about the anus.

Fer. Sulph. ʒi.
Water Oij.
Fiat solution.

Inject an ounce into the anus twice per day. Cleanse the parts with cold water after each stool, and use a slight sitz-bath to the parts as often.

Remarkable case of Absence of Pectoralis Major and Minor of the left side.—This was in a boy aged seven years. The ribs below the clavicle were only covered by integument, and seemed to be remarkably slender and frail, and the left side of the sternum also correspondingly imperfect. These muscles as well as the ribs and sternum of the right side, were remarkably well developed.

Morbus Coxarias.—The patient was convalescing, so much so as to be about. Although this boy had had several relapses, evidently on account of the difficulty of restraining him, and finally suppuration, persisting for many months, he is now recovered so far as to get about with only slightly restricted motion at the hip joint. Continued moderate exercise in the open air was directed, and an intimation given that, unless motion was quite perfectly restored, within a reasonable time, that forcible extension would be resorted to.

Fractured Ulna.—This fracture was from the application of direct violence, resulting in great swelling of the parts about the elbow joint. Special attention was called to the necessity of using splints wider than the forearm, and of adapting the padding &c., to the condition of the arm growing out of the manner of occurrence of the injury. Patient suffered very severe pains at night, on account of which directions were given to dispense with the splints, as far as possible, and use freely the following liniment:

℞. Chloroform.
Sweet oil ā ā ℥i.
Pul. camphor ʒii. Mix.

Wednesday Morning, Oct. 26.—Hospital of Ohio Penitentiary. *Dislocation of Clavicle* at outer extremity. Prof. H. stated that he had resorted to several recognized appliances for the purpose of

maintaining reduction in this case, without success. He finally hit upon a combination of appliances which accomplished the indications perfectly, as follows:

Taking a piece of cloth 20 inches wide, and two yards or more long, it was torn into a bandage with four equal tails, and a body of four inches. (Chisholm's bandage.) The body, resting on the point of the elbow flexed to a right angle, one-half the bandage rests upon the lower part of the humerus, passes horrizontally around the body, ascends as it passes back, so as to cross on the shoulder of the side from which it started, where it is kept well spread out, free from wrinkles, and abundantly stitched; the part of bandage corresponding to the fore arm is passed over the well shoulder, and secured first, however. This being done, a common roller bandage is run from the forearm just at the elbow over the end of the dislocated clavicle, and being returned a few times to give it the requisite firmness and strength, it, in its turn, is to be stitched down carefully to the bandage beneath. This gives a dressing which the patient cannot possibly displace, and which answers the indication perfectly.

Hemorrhoids.—Two cases were presented for operation, one of which was deferred. The ordinary operation of transfixing with a needle, ligating in two lateral halves, and returning the mass with a suppository of opium, was performed. On the fourth day after the operation the mass was thoroughly sphacelated, the bowels had acted, and the patient was disposed to go to work.

Dislocation of Femur.—This was of 10 years of standing. The patient was stripped below the waist, and placed upon a stool. The head of the femur was on the dorsum of the illiium, without either inversion or eversion of the toes.

The shortening was apparently three inches. Careful measurement, however, from the anterior superior spinous process of the illium, on the two sides, to the level of the trocanter major, and the external malleoli of corresponding sides, rendered it evident that the actual shortening was only about an inch.

By the use of a common square, one leg of which was carefully directed in the axis of the body, it was shown that the level of the anterior superior spinous process, on the injured side, was full an inch and a half above a horizontal line passing through that of the other side.

Prof. H. instituted an inquiry as to the cause of this elevation of

one side of the pelvis, while the shortening was really such as to call for a depressed condition of that side.

He stated that a similar state of things was frequently found in connection with certain conditions of this articulation, the later effects and incidents of morbus coxarias. That he supposed it resulted from a shortening between the fused points, to which, on the injured side, the muscles, especially the gluteal, were attached; and by which the pelvis was kept balanced with the true crest of the illium at a certain level. This distance being diminished on one side, in other words, these muscles being relaxed, are no longer in antagonism with the corresponding muscles of the other side, and hence these muscles undergo shortening, and depress the corresponding side of the pelvis to such degree as may be necessary to restore the antagonism.

The crippled leg was 4 inches less in circumference than the other. The patient stated that eight weeks after the dislocation he was able to do any common manual labor, and so continued.

The case was, of course, not presented with any view to an attempt at reduction.

Numerous other interesting cases were presented, which we forbear to present.

College Clinic, Saturday, Oct. 29. *Fistula in Ano.*—An apparently healthy man, aged 22, from Union county, presented himself. Four months previously a rather painful state of the parts about the left illeo-rectal region, was subjected, accidentally, to a moderate application of force, which caused rupture, and the discharge of a small quantity of pus. This never closed. Two months since, the patient, from an exposure, contracted a cough, which was once, by the same means, subjected to aggravation, in connection with which there was slight expectoration of streaks of "dark colored" blood. Pulse 100 per minute; respirations 24. Beneath the right clavicle there was obvious dulness on percussion; more or less of bronchial respiration, and distinct vocal fremitus.

Prof. H. had but little doubt but that these symptoms originated in tuberculosis.

On examination the fistula proved to be a complete one, with its external orifice about two-thirds of an inch from anal margin, and the internal one just at the upper margin of the sphincter.

The question of an operation was discussed. Prof. H. advised

that it should be performed; detailing cases in which, in his opinion, anal fistula produced serious impairment of general health, such as is eminently favorable to the production of tuberculosis. One case, that of a physician of his acquaintance, whose health was despaired of, on account of presumed tuberculosis, and an anal fistula. After some hesitation the fistula was operated on, and resulted in restoration to an excellent state of health. As the patient was not prepared for an operation at the time, he was advised as follows:

℞. Ol. Jecorus Acelli Oj.

S. Take a large table spoonful, at each meal, with twice that quantity of good rye whisky, and a liberal animal diet.

℞. Syr. Squill,
Cam. Tinc. Opii ā ā ℥ii.
Iodide Potassium, ℨiss.

M. S. Take a teaspoonful as often as the cough may require palliation.

℞. Tinc. Iodine, 2 oz.

S. Let this be painted freely on the subclavicular region of the right side, as frequently as the sensibilities of the patient will allow.

Nœvus.—Two beautiful cases were presented, only one of which was subjected to operation, for the want of time. Patient was only three months old. The disease appeared after birth, was on the left parietal bone, and was growing so rapidly, that it was thought best not to postpone the operation. The tumor was of some size, its greatest diameter being about 16 lines.

Chloroform was given, and acted delightfully. The tumor was then ligated, doubly loaded nævus needles being carried under the base of the tumor, the intervening scalp carefully divided at a moderate distance from the tumor, contiguous ones tied, and finally the whole tightened, to the utmost degree, and the mass strangulated, in tyeing the last pair.

Notes on some of the Chemical Reactions of Brucia. By T. G. Wormley, M. D.

In the following experiments, pure crystallized brucia was dissolved in pure water, when necessary, by the aid of just sufficient acetic acid. No deduction was made for the water of crystallization in the alkaloid. A small drop of a saturated solution of the reagent was applied to a grain of the brucia solution, placed on a glass slide.

The amount of brucia operated upon will frequently be stated in the form of a fraction, it being understood to imply the fractional part of a grain of brucia, in one grain of water.

1. Potash.

1. $\frac{1}{100}$th, grain of brucia, gives, with a solution of potash, an immediate white amorphous precipitate, which very soon becomes a crystalline mass. The ppt. is readily soluble in acetic acid, and in deficiency of the reagent, but not readily soluble in large excess.

2. $\frac{1}{500}$th, gives an immediate cloudiness, which is soon crystalline, but not abundant. The ppt. is increased by rubbing the drop with a glass rod.

2. Ammonia.

1. $\frac{1}{100}$th, gives no immediate ppt., but very soon crystals begin to form, which in a few minutes are very abundant. If the solution be rubbed, granules and crystals appear immediately. The ppt. is prevented by large excess of ammonia, but when formed, it is not readily dissolved by excess.

2. $\frac{1}{500}$th, by rubbing a few minutes, granules and crystals appear.

3. Sulphocyanide of Potassium.

1. $\frac{1}{100}$th, in a few seconds crystalline tufts begin to form, which are not readily soluble in acetic acid.

2. $\frac{1}{300}$th, no indication after 15 minutes.

4. Iodide of Potassium.

1. $\frac{1}{100}$th, almost immediately rough crystals begin to form, and in a short time there is a good deposit of tabular plates.

2. $\frac{1}{500}$th, no indication after rubbing several minutes.

5. Chromate of Potash.

1. $\frac{1}{100}$th, gives an immediate yellow amorphous ppt., which very soon becomes groups of aciculated crystals, insoluble in acetic acid.

2. $\frac{1}{1000}$th, by rubbing a few minutes, there is a very good crystalline ppt. If excess of the reagent is used, there will be no ppt.

3. $\frac{1}{5000}$th, after rubbing several minutes, there will be a slight amorphous cloudiness, but no crystals.

6. Bichromate of Potash.

1. $\frac{1}{100}$th, same as with chromate of potash.

2. $\frac{1}{1000}$th, by rubbing, immediate rings of crystals.

3. $\frac{1}{10000}$th, in several minutes, a distinct amorphous ppt., which after some time becomes crystalline needles.

7. Tannic Acid.

1. $\frac{1}{100}$th, an immediate copious, dirty white amorphous ppt. which is soluble in a few drops of acetic acid.

2. $\frac{1}{1000}$th, much the same as 1.

3. $\frac{1}{10000}$th, immediately obvious, in a few minutes it is very satisfactory. The ppt. is somewhat bluish.

4. $\frac{1}{20000}$th, in a few seconds, a bluish ppt. is obvious, which soon becomes quite good.

5. $\frac{1}{40000}$th, in a little time the ppt. is perceptible.

8. Carbazotic Acid.

1. $\frac{1}{100}$th, gives an immediate copious greenish yellow amorphous ppt., which after standing some time, becomes crystalline. The ppt. is not easily dissolved by large excess of acetic acid.

2. $\frac{1}{1000}$th, an immediate yellowish green amorphous ppt.

3. $\frac{1}{5000}$th, in a few seconds a green ppt., which is increased by rubbing.

4. $\frac{1}{10000}$th, after several minutes the ppt. is just perceptible.

9. Terchloride of Gold.

1. $\frac{1}{100}$th, an immediate yellow amorphous ppt., which soon becomes flesh colored.

2. $\frac{1}{1000}$th, a greenish yellow ppt, soon becomes yellow; upon the addition of a few drops of a potash solution, the ppt. dissolves and gives a clear solution, with a slight dark ppt.

3. $\frac{1}{10000}$th, much the same as 2.

4. $\frac{1}{20000}$th, the ppt. begins in less than a minute, and soon is quite satisfactory.

5. $\frac{1}{40000}$th, the ppt. is obvious, but not satisfactory after several minutes. All the above precipitates remain amorphous.

10. Bichloride of Platinum.

1. $\frac{1}{100}$th, gives a light yellow amorphous ppt., which almost immediately becomes small aciculated crystals; in this it differs from strychnia. The ppt. is insoluble in acetic acid.

2. $\frac{1}{1000}$th, an immediate crystalline ppt.

3. $\frac{1}{5000}$th, very soon crystals appear; they are increased by rubbing.

4. $\frac{1}{10000}$th, by rubbing, crystalline rings are immediately produced.

5. $\frac{1}{20000}$th, in a few minutes, prismatic crystals are seen, with the microscope they are rather abundant.

6. $\frac{1}{40000}$th, not satisfactory after several minutes.

Chloride of palladium gives the same results as the above reagent.

11. Ferricyanide of Potassium.

1. $\frac{1}{100}$th, gives an immediate light yellow amorphous ppt., which soon becomes beautiful rosettes, plates, and stella. These are the most beautiful polariscope objects that we have seen, often showing colors without either polarizer or analyzer. These crystals are very characteristic.

2. $\frac{1}{500}$th, by rubbing, very soon an abundant granular ppt.

3. $\frac{1}{1000}$th, after some time, a slight cloudiness.

Ferrocyanide of potassium gives no ppt. in a $\frac{1}{100}$th solution.

12. Bromine in Bromohydric Acid.

1. $\frac{1}{100}$th, copious, brown amorphous ppt., which soon changes to yellow, and will dissolve if sufficient reagent has not been added. Soluble in excess of acetic acid and potash.

2. $\frac{1}{1000}$th, much the same as 1.

3. $\frac{1}{10000}$th, a greenish yellow amorphous ppt., which after a little time dissolves, and is not reprecipitated upon the addition of reagent.

4. $\frac{1}{20000}$th, greenish yellow, soon dissolves.

13. Iodine in Iodide of Potassium.

1. $\frac{1}{100}$th, copious orange brown amorphous ppt., insoluble in acetic acid, but dissolves in several drops of potash solution, with the production of a dirty white ppt.

2. $\frac{1}{1000}$th, much the same as 1.

3. $\frac{1}{10000}$th, brownish ppt., soluble in a drop of potash solution, without the production of a white ppt.

4. $\frac{1}{50000}$th, a greenish yellow ppt.

5. $\frac{1}{100000}$th, a very distinct, dirty yellow cloudiness. It is best observed by placing a drop of the reagent by the side of the brucia solution, and allowing the drops to flow together.

6. $\frac{1}{500000}$th, the cloudiness is still perceptible.

14. Sulphuric Acid and Nitrate of Potash.

1. $\frac{1}{100}$th, if the drop of brucia solution be evaporated to dryness

in a steam bath, and the residue be touched with a small drop of concentrated sulphuric acid, it will immediately become rose red, and give a solution of much the same color; if now, a small crystal of nitrate of potash be added, the solution immediately changes to a fine orange-red.

2. $\frac{1}{1000}$th, upon the application of sulphuric acid, the residue becomes a very fair rose red, but the solution is faint; the addition of the nitre gives a fine orange.

3. $\frac{1}{10000}$th, the acid gives a faint red, and the nitre, an orange, which soon becomes yellow.

4. $\frac{1}{20000}$th, the acid solution has a faint red color, which is best seen over white paper; the addition of nitre changes it to yellow. If a small crystal of nitre be moistened with sulphuric acid, and then dragged over the deposit, the crystal becomes orange, and gives a solution of the same color.

5. $\frac{1}{50000}$th, if the nitre, moistened by the acid, be placed upon the deposit, the crystal immediately becomes quite red, and when pushed over the deposit, leaves a red track.

We may thus, by the above means, apply two very characteristic tests to the same deposit.

15. Nitric Acid and Chloride of Tin.

1. $\frac{1}{100}$th grain pure brucia, if touched with a small drop of nitric acid, becomes a fine bright red, and gives a solution of the same color, which upon the application of heat is changed to yellow-red; if, after the solution has become cold, a drop or two of solution of chloride of tin be added, it immediately assumes a beautiful purple. The color is destroyed by excess of nitric acid.

2. $\frac{1}{1000}$th, the acid gives a fine red, which soon becomes yellow-red, and when heated, is changed to yellow. The tin solution gives a beautiful lilac color.

3. $\frac{1}{10000}$th, with the deposit, the acid gives a very good red, and the solution is faintly red; if after heating, the proper quantity of tin solution be added, it gives a perceptible lilac, but it is necessary that the quantities of acid and tin be well apportioned, otherwise the latter will give no indications. This is about its limit.

4. $\frac{1}{50000}$th, if the brucia solution be evaporated to dryness in a watch glass, and while warm, a very small drop of nitric acid be placed in the centre of the deposit, the margin will soon become perceptibly red; if then the deposit be dissolved in the acid, and

evaporated to dryness in a steam oven, it will leave a good red ring deposit.

5. $\frac{1}{1000000}$th, when treated as in 4, the acid gives but little indication, but when it is evaporated, it gives a very fair red ring.

6. $\frac{1}{5000000}$th, the acid gives no indication, but when evaporated, it leaves a deposit in the form of delicate red threads, which are best seen by placing them over a white surface.

As an appendix to the *color test* in the article Strychnia, in the September No. of this Journal. If $\frac{1}{1000000}$th grain of strychnia be treated with a very small quantity of concentrated sulphuric acid, and the amount of bichromate of potash be well adjusted, it will give perfectly satisfactory results; the deposit containing very many visible points, any of which would be characteristic. These results were obtained from the deposits of several different solutions of strychnia. It is but right to state, that to be successful, it requires a very nice balancing of the materials concerned.

Columbus, Ohio, Nov. 1st, 1859.

[Fom the Cincinnati Lancet and Observer.

Likes and Dislikes.

Boston, September 7, 1859.

Messrs. Editors—It is always pleasing to the lover of art to gaze upon a landscape scene where nature herself seems almost outrivaled by the hand of the artist. Still, if viewed with a "critic's eye," some discrepances may possibly be noticed; while to the casual observer all is beauty and harmony of proportion.

So it is in taking a retrospect of the medical profession. The picture is fair to look upon. It presents a class of gentlemen, with noble and generous impulses, ever ready to respond to the call of suffering from whatever source it comes—consecrating their time and best energies to the relief of those around them. But, while contemplating this scene, certain *likes* and *dislikes* appear in the distant view; and in speaking of which I would do it in no "fault-finding spirit," or accuse any medical gentleman of being guilty of any discourteous acts in his intercourse with his brother associates, or otherwise; but simply look over the canvass and notice some of the defects, as well as the excellencies of the picture presented; and if,

in the opinion of others, no such exigencies ever arise, then shall we experience—

"The soul's calm sunshine and the heartfelt joy."

1. I dislike to see physicians at enmity with each other: it cultivates a spirit of jealousy and hatred, and serves to create and perpetuate a hostile feeling among their clients.

2. I dislike to hear a physician speaking ill of his professional brother, or insinuating evil against him, whether in the sick-room, among medical men, or the people at large: it indicates that he wishes to elevate himself at the expense of another's downfall, regardless of merit or character.

3. I dislike to see a regular physician consult with a Homœopathist, Eclectic, Botanic, or any other pretender outside the legitimate practice: it shows that the *love* for the *consulting-fee* is stronger than that of an *honorable* reputation.

4. I dislike to see a physician call a consultation for the *sole* purpose of casting a portion of the responsibility of the case upon another, for fear his reputation may suffer if his patient succumbs: it exhibits a want of fortitude and ability when they are most needed.

5. I dislike to see the consulting physician *magnify* the case under consideration beyond what it really is, or make any *extraordinary* display, in the presence of the friends of the patient, of his diagnosticating powers; or intimate by word, look, or knowing expression, *that all is not right:* it seems to say to those interested, that the true nature of the disease has never been detected till now; that his visit is most opportune, just in season to *save* the patient.

6. I dislike to see the consulting physician retailing in the shops, streets, or "where people do congregate," that he has just been called to the sick bed of this or that person, by this or that doctor; that he has so many consultations a day or week, and that he *always* arrives when the danger is most imminent, and the treatment incompetent: it cultivates a love for untruthfulness, and endangers him in becoming egotistical and a disseminator of news.

7. I dislike to see a consulting physician demand a change in the prescriptions, without sufficient reasons for so doing: it looks as if he wished to create an outside influence that something *more needed* to be done; when, in truth, the patient is doing well, or is beyond medical skill.

8. I dislike to see the consulting physician, while at the bedside, concur fully with the attendant, in etiology, diagnosis, prognosis,

and treatment; and then turn away and disseminate his reflections, and speak of unscientific therapeutics, etc.: it has the appearance of wearing *two faces*—the one serene and majestic, the other deceitful and hypocritical.

9. I dislike to see two physicians, when an hour is named to see a patient, disappoint each other, by the non-appearance of one or both, at the time selected: it shows that *punctuality* is yet to be learned, and that much valuable time is lost by negligence.

10. I dislike to see a tacit understanding between physicians, to call each other alternately in consultation: it savors too much of the common idea, "you tickle me and i'll tickle you."

11. I dislike to see the consulting physician, when there is some apparent dissatisfaction towards the regular attendant, resort to any *means dishonorable* to increase that *want* of confidence: it gives evidence that he would like to secure the patient, and more deeply wound the feelings of his medical brother.

12. I dislike to see a physician, when called suddenly to a patient, in the absence of the "family doctor," use the occasion to retain the family to himself, by extolling his success in the treatment of *just such cases* as the one before him, and that he has a remedy peculiarly adapted to the disease, which he wishes to try, and asks for a continuance of attendance: it certainly infringes upon the golden rule, "Whatsoever ye would that men should do to you," etc.

13. I dislike to see a physician, where called into the family of another, in his absence, remind the afflicted friends, with more than *ordinary* zeal, that his hours at home for medical advice are so and so, that his wife and family would be happy to solicit their friendship, and that, as a future reference, he would kindly tender a few of his cards, etc.: it seems like adroitly throwing the *bait* for a *bite*.

14. I dislike to see physicians *undercharging* each other: it looks like tampering to the avarice of their clients, and graduating their bids for practice to the amount of *available skill* on hand.

15. I dislike to see a physician, when called while the attending one is absent, demand less per visit than the latter: it evidently shows an effort on his part to buy the patient at some future time.

16. I dislike to see the elder physician, of forty or fifty years of experience, or even of lesser years, with an established reputation, and a competency, treat with disrespect, and neglect, the younger members of the profession, who are endeavoring to gain an honest livelihood in an honorable calling: it savors of jealousy and cupidity.

17. I dislike to see physicians give gratuitous service for the sake of practice, to those abundantly able to compensate them: it operates disadvantageously to practitioners dependent upon their labors for support.

18. I dislike to see medical men *negligent* and *timid* in presenting their bills: it cultivates the same *negligence* and *apathy* among their patrons, and evinces a fear that they may lose a family now and then by demanding their honest dues.

19. I dislike to see physicians revealing professional secrets between them and their patients: it argues a betrayal of confidence, and shows a want of integrity.

20. I dislike to see physicians reporting their *successful* cases of cure, and suppressing the *unsuccessful:* it furnishes unreliable statistics, and makes the reporter appear a little too ostentatious.

21. I dislike to see physicians making, vending, using or in any way giving countenance to "secret remedies:" it is sacrificing every principle of right, honor, and liberality for selfish and mercenary purposes.

22. I dislike to see a physician, when he enters the sick room, wear a physiognomy "as long as the moral law," or put on an air of cold formality: it sometimes leaves behind a depressing and unfavorable influence upon the minds of the patient and attendant.

23. I dislike also to see *too much* levity in the sick room: it may lead the occupants to think that the doctor depends more upon the exercise of the facial muscles, than the intellect, in his therapeutics.

24. I dislike to see physicians addicted to habits which they discountenance in others; it shows, if nothing more, that they are believers in the old maxim, that it is *one* thing to preach, and *another* to practice.

25. I dislike to see an aristocracy of feeling, or exclusiveness, existing among physicians, founded wholly upon the possession of wealth, irrespective of true merit in medical science: it follows the too common idea, outside of the profession, that the worship of the "molten calf" should take the precedence.

I will not pursue this subject further under this head, but in a subsequent number will give what I like to see, or the fairer portion —the real foreground of the picture. B.

Stomatorrhœa Vicarious to the Menses.—Dr. Wood made the following statement: "During my last term of service in the Pennsylvania Hospital, a case of stomatorrhœa occurred, which appears to me worthy of notice. The patient was a woman, of about twenty-five years of age, in other respects apparently in good health. She had for three months been affected with a very profuse and disagreeable discharge from the mouth, which she herself supposed to proceed from the stomach. I soon, however, convinced myself that the liquid discharged was a mixture of saliva and a mucoid secretion from the lining of the mouth and fauces. It was nearly colorless, somewhat viscid, and of an unpleasant odor and taste, and appeared to be constantly flowing. As there was evidence of some inflammation of the mucous membrane, I considered the case one of simple chronic stomatitis, and treated it accordingly, both by general and local remedies, for a considerable time, but without the slightest advantage. My attention having at length been directed to the menstrual function, I found that it had been arrested about the same time with the occurrence of the discharge from the mouth. Thinking that the two affections might be connected, I put the patient on the use of aloes and the pill of carbonate of iron, with the hot hip-bath daily, which apparently had the effect of restoring menstruation, after which the affection of the mouth ceased immediately. This case may prove useful, if in no other way, by inducing an early inquiry into the state of the menstrual function under similar circumstances."—*Transactions of the College of Physicians of Philadelphia.*

Dr. Young, of Edinburg, reports the successful treatment of a number of cases of hydrocele, by Simpson's plan with the iron wire seton. No more inflammation is said to be excited by the presence of the wire, than is necessary for the adhesion of the walls of the sack.

Prof. George Regnoli, of the school of Florence, died recently. He was one of the most celebrated operators in Italy, having been the successor of the most celebrated Vacca Berlingheri at the University of Paris.

Different Modes of Performing Lithotomy in the English Hospitals.—A large majority of English surgeons employ the ordinary lateral method of lithotomy on a curved staff. There has been, however, a considerable disposition to endeavor to improve on it of late years. The medium plan, so strongly recommended by Mr. Allarton, has been tried by not a few London surgeons, and amongst provincial ones has found a warm advocate in Mr. Teale of Leeds. At the London Hospital it was first adopted by Mr. Ward, about two years ago, and since then has been employed by his colleagues, Mr. Critchett and Mr. Gowland, each in a single instance. All the three patients were children; all recovered well, and in all it was considered that much less than the usual amount of bleeding took place. At Guy's Hospital, Mr. Cock has performed median lithotomy several times, and Mr. Erichsen has done the same at University College Hospital, both surgeons being, we believe, well satisfied with its results. On all hands it is considered to be best adapted for children and for small stones. At St. Barthelomews, Mr. Lloyd still continues to operate in all cases by his recto-urethral (median) method, which we described in detail when he first adopted it in 1853. He informs us that he has not yet lost a case after it, and considers it decidedly preferable to the lateral operation. His colleagues, however, without exception, we believe, always employ the latter. At the Metropolitan Free, Mr. Hutchinson always employs his rectangular catheter-staff, and considers that he obtains great advantage from it. The same instrument has been employed at King's College, by Mr. Lee, but it is not, as far as we observe, in use at any other hospital. In a recent instance in which the calculus was of large size, Mr. Hutchinson injected the bladder with oil instead of water, in the hope of facilitating the dilatation of the parts.

With regard to the median operation as advised by Mr. Allarton, it is universally admitted to be adapted only for small calculi. Now Mr. Lloyd's experience during the last few years has quite proved that when the anterior commission of the sphincter ani is cut clear through from the perineal wound, there is no danger of the part not healing. Might it not be well, therefore, to adopt this measure whenever, after the usual median incisions, the stone has been reached and has been found too large for removal? Mr. Lloyd's operation gives abundance of room.—*London Med. Times.*

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PART FIRST

ORIGINAL COMMUNICATIONS.

Dislocation of both knees at one time. Extirpation of a very large Tumor, including the Superior Maxillary bone. Caries of Carpus; Amputation. Immense Anal Prolapsus—New Operation—Cure. Cases selected from the Surgical Clinics of Starling Medical College. By J. W. HAMILTON, Prof. of Surgery.

DISLOCATION OF BOTH KNEES AT ONE TIME.—This case was presented at the hospital of the Ohio Penitentiary, on the 2d day of November.

The patient, Simon Boehm, is a German, aged 44, of medium muscular development, and good constitution. While engaged in some labor about a very large pile of saw-dust, a large quantity of it suddenly fell, burying him beneath. On being extricated it was discovered that his knees had sustained some injury, in consequence of which he was carried to the hospital, with the ordinary symptoms of intense shock of injury. His knees were both found quite completely dislocated ; both legs being thrown transversely to the right, while the fibula of the right side was fractured, just below its head. Very slight manipulation, only, was necessary to effect reduction. Equally slight handling, only, was required to bend the legs towards the left, making with them, and the thighs, almost any desired angle. In fact the ligamentous structures about the joint were so completely broken up, and the muscular system so perfectly

relaxed, that it is supposed that the articular surfaces might have been put in almost any imaginable relation to each other. The skin was not injured.

The patient was put on his back, anodynes, stimulants, &c., administered, and an attempt made to retain the reduction of the dislocations, by position, pads, &c. At the end of twenty-four hours this course was abandoned, because of its not succeeding; changes in posture, and various motions being attended with gliding of the surfaces, and lateral bending of the limbs. Comforters were now folded, so as to be of three thicknesses. Then, rolling from each end till the cylinders thus formed approximated the middle of the folded comforter, a leg, from the middle of the thigh, was dropped between the cylinders thus formed; a good piece of oil-cloth of adequate size being interposed. The leg was thus provided with a soft bed consisting of three thicknesses of a thick comforter, and extensive, soft, lateral support was given its sides, by the junk-like cylinders. The oil-cloth afforded the means of making continuous applications of cold water. Each leg being thus adjusted, the two were thus thrown widely apart, and the patient was not able to turn upon his side, a position which was invariably attended with displacement.

The additional treatment resorted to consisted mainly of the use of opium, and the continuous application of cold water. This was continued, in connection with the above arrangement, for ten days. Greater inflammation than was present at any one time, is often produced by very trifling causes. At the end of this time, active inflammatory symptoms had subsided, and a considerable degree of solid edema was present. The apparatus was discontinued; slight passive motion and the external use of iodine were directed.

On the 45th day, the legs being carefully bandaged, and the knees supported with pasteboard splints, the patient was able to go about the hospital with the assistance of crutches. There was at this time no anchylosis: on the contrary the knee-joints presented almost perfect freedom of motion. In the right leg, however, by the exercise of but very moderate lateral force, a partial dislocation could still be produced, at pleasure. A complete recovery is confidently anticipated.

Extirpation of a large Tumor, including the Superior Maxillary Bone.—This case was presented at the College Clinic for Saturday, November 12.

The patient was J. W. M——, a lad aged 16 years, from Muskingum county. More than three years previously he was attacked with severe pains, supposed to be toothache, in the right superior maxillary bone. The suffering, sleeplessness, &c., were such, for six months, that he was pretty much confined to the house. In the mean time, the region of the jaw had undergone apparent tumefaction. For a year and a half this grew rapidly, attaining very considerable size. At this stage he visited the Commercial Hospital in Cincinnati, where ligation of the carotid of the right side was performed, for the purpose, it is supposed, of retarding the growth. It probably had that effect, to some extent. Subsequently the boy visited the leading cities of this country, and Liverpool in England, for the purpose of obtaining professional advice and assistance. But for some reason the case does not seem to have enlisted very earnest attention, or was, perhaps, not deemed suitable for an operation. In the mean time, although the general health was good, the disease was steadily progressing, and it was evident a fatal event was not far in the future. The tumor was now of immense size, pressing forward the eye, and giving it a most unpleasant prominence. The zygoma and malar bone of the affected side were thrown out, so as to give a most unseemly prominence in that situation. All the teeth of the affected side, except the first bicuspid, the canine, and two incisors, had long previously been forced out, and these were huddled together on the left side of the median line. The hard and soft palate were forced down upon the floor of the mouth : the nares of both sides were plugged tightly, the septum being forced towards the left: the tumor protruded between the teeth so as to separate the jaws to the extent of fifteen lines. *The upper jaw of the right side was thrown sixteen lines in advance of the lower*, while that of the left side was advanced twelve lines, and thrown into a direction not greatly removed from a straight line. The raphe of the hard and soft palate was removed but a very few lines from the alveolus of the left side, between which parts there was a groove, admitting of the passage of food, &c.

Laterally, the tumor was exceedingly prominent, and descended to a point six lines below the level of the inferior maxillary bone. Posteriorly, just beneath, and in close connection with the posterior extremity of the zygoma, a mass presented itself, larger than a hen's egg, the connections of which, whether superficially with the posterior part of the lateral mass, originally; or whether there was a

deep connection with the original disease, such as resulted in its development in and through the pterego-maxillary fissure, could not be made out. The latter was apprehended, and was the only satisfactory explanation of the anterior projection of the jaw.

The part protruding from the mouth was in a state of ulceration. Frequent hemorrhage occurred from this surface, and from all the mucous surfaces involved. During sleep breathing was slow and noisy, to a most frightful degree.

Repeated examinations, and the most rigid scrutiny of all the circumstances of the case, resulted in a conviction that an operation was practicable, and demanded. The views entertained of the case were as follows :

The disease evidently, or at least probably, originated in the antrum. Having progressed, to some extent, the walls of that cavity had become greatly attenuated, or had even disappeared, from absorption. That now being relieved from its osseous connections, the general enlargement of the mass, or rather, perhaps, the enlargement of that part occupying the situation of the pterego-maxillary fissure, had gradually, and with comparative facility, forced the entire jaw forwards. This view of the case was regarded as being much more consistent with all its circumstances, than the supposition of an original tumor in the pterego-maxillary space, although the leading diagnostic symptom of that difficulty—the anterior projection of the upper jaw—was present, in a marked degree.

All the hazards and uncertainties being distinctly stated to the parents in writing, a written request was made that they should be assumed; which was accordingly done, the venerable Dr. Geo. Sacsche, and Drs. Drury, Seltzer, Gill and Washenswanz, assisting.

The usual incisions, from the inner canthus to the middle of the upper lip, and from the zygoma to the outer angle of the mouth, were made, in the ordinary manner. In making the latter, a very great curvature downwards was given the incision, so as to make it practicable to get below the tumor. In dissecting up the flap it was found necessary to make it very thin, as the tumor had involved, or caused the absorption of the subjacent tissues. Dissecting the cellular tissue, and infra orbital nerve from the floor of the orbit, the eye was protected by a spatula. The usual division of bone was now effected with great facility, mainly by the use of the bone forceps. The lateral aspect of the tumor being next well cleared of soft parts, an attempt was made to bring the whole away by press-

ing it down in the ordinary manner. But this could not be accomplished. The steps of the operation were now carefully reviewed, with a view to ascertain whether, in the previous steps, there had been any inefficiency, especially in reference to the division of bone. None could be discovered: the result was a conviction that the difficulty originated in the intimate attachments of the parts beneath the zygoma, and which could not be reached at this stage of the operation. The only alternative was to attempt the removal by piece meal. With some difficulty a mass of the size of a fist was removed: then a smaller one; and now the lobe wedged in the situation of the pterego-maxillary fissure was reached and torn away with the fingers, the knife merely assisting. In now attempting to complete the removal of the floor of the orbit, it gave way, leaving the posterior part of it in situ. The disease was strongly attached to its under surface, and to the base of the skull for some distance beyond. This was cut as closely as possible with the knife, and then subjected to the vigorous use of the actual cautery. Only a slight fringe of the posterior margin of the soft palate was saved. The operation was necessarily tedious and bloody in the extreme. The attenuated flap seemed to have lost all signs of vitality: the dressing was as usual. Chloroform was given in the outset, but was very soon abandoned, on account of the hemorrhage.

The shock to the system was very great, but fair reaction was present at the end of 20 hours. For severāl days sloughing of the flap was apprehended. The stitches were removed on the third and fifth days, adhesion, meanwhile, having occurred. Some difficulty was experienced in keeping the flaps stuffed out, on account of the great size of the chasm.

On the 10th day, I found the patient traversing our large college building. On the 12th day, he traversed the city on foot. On the 14th day, he made a visit to his friends, fifty miles distant, walking two or three miles at the extremities of the route.

His appearance is, of course, vastly improved, although it is still peculiar. The malar bone and zygoma are unseemly, though their undue prominence is in a great measure lost, from a fracture of them which occurred in the operation. The middle incisor tooth of the left side stands with its edge exactly forward, and is 12 lines in advance of its fellow, making an unpleasant prominence in that situation.

Previous to the operation there was, except in a single direction,

total blindness. Vision, and the natural degree of prominence of the eye, are perfectly restored.

The tumor is evidently a simple fibrous mass ; yet from its having so perfectly passed the boundaries of the antrum, there must, of course, be some degree of apprehension, that enough escaped the knife to effect a reproduction. Yet the most rigid scrutiny, after the completion of the operation, as described, did not indicate a single suspicious point. The tumor is of such size as to nearly fill a quart jar.

Articular Caries.—Tracy Wilcox, a farmer aged 28, of Franklin county, presented himself at the College Clinic for Saturday, December 3. Till recently patient enjoyed good health, and is of healthy parentage. Nineteen months previously a difficulty appeared at the left wrist, which for more than a year was supposed to be rheumatic. Two and a half months since, the pain, for the first, became serious. Six weeks ago, for the first, purulent discharge occurred.

At the time of his appearance at the Clinic his general health was seriously impaired ; pulse, matutinally, 120 ; vesperally, 136 ; breathing more than 30 per minute ; appetite impaired ; rest imperfect. The horizontal position, whether diurnally or nocturnally assumed, was productive of cough, which, even the horizontal position being maintained, subsided within a reasonable length of time, and was attended merely with the expectoration of moderate quantities of mucus. A careful physical exploration of the chest failed to elicit any organic difficulty, in either heart or lungs.

The striking features of the case relate to the local difficulty. On the palmer aspect of the lower extremity of the radius was a discolored surface of the size of a three cent piece, which was perforated by two or three small sinuses, from which small quantities of grumous pus could be pressed. Otherwise there was no discoloration, and but very slight tumefaction. On grasping the parts, however, at any point about the carpus, or the proximal portion of the metacarpus, the bones moved freely upon each other, with a grating sensation not to be distinguished from the ordinary crepitation of fractured surfaces. One or two of the carpal bones were apparently floating quite loosely in the disorganized mass, so much so that, apparently, by an incision through the integument, they might have been extruded, with great facility. The extent of the

disease could be estimated quite definitely. It evidently implicated the articular surface of the radius and ulna, both ranges of the carpal, and the proximal articular surfaces of all the metacarpal bones.

Accordingly, as the only means of saving the life, and restoring the general health of the patient, an amputation was performed, at about the junction of the middle and lower third of the fore arm. Within 2 hours after the operation the pulse fell to 90 per minute, and for 30 hours it continued at from that number to 96, with the respiration at from 26 to 29, and the patient in every way quite as comfortable as before the operation. From this time the pulse became more frequent, ranging at about 112, for the next 15 days. During this time, the patient used liberally Acidum Sulphuricum, Quinia Sulphus, and, at a later stage, Ferri Carbonas: meanwhile, a liberal diet, and the regular and free use of a good article of common ale, were enjoined. At the end of 16 days the wound had united, but only one ligature had separated, two remaining. At that time, his apartment being very small, it was thought best to consent to his leaving, for his home in the country.

The only remarkable features connected with this case, are expressed in a single word, its insidiousness. Only six weeks before the amputation, suppuration occurred, for the first; and even then, was at no time more than slight in degree; yet the disorganization was most extensive. All the bones, as shown by the specimen, are deprived of almost every vestige of articular cartilage.

Immense Anal Prolapsus. New operation. Cure.—This case was presented at the Penitentiary Clinic, December 7. An Irish lad, named Quin, aged 20, pale and feeble, with great muscular relaxation, had been tormented with prolapsus for a long time. For two years past, the protrusion was excited by the most trifling causes, such as the erect posture; a slight cough, when in the recumbent posture; or changing position in bed. When thus protruded there was an almost constant passive oozing of blood, mucus, &c., from it. When protruded with any thing like violence, as in defecation, lifting, or severe coughing, sharp jets of blood escaped, thus greatly reducing his strength.

The protruded mass was of an exceedingly florid color, and of the shape of a truncated cone. The ordinary length of the cone was full four inches, the base, resting upon the integument, was ten and

a half inches in circumference. The truncated extremity was about an inch in diameter.

All the ordinary means had been tried and repeated, without success. In addition, a deep suclcus was made around the mass, by the use of potassa fusa, hoping that the contraction, connected with its cicatrization, might be salutary. It did no good, however.

After careful and repeated consideration of all the circumstances of the case, it was determined to yield to the entreaties of the patient, and incur the hazards of the following operation:

The bowels having been thoroughly evacuated, and an injection of warm water containing a drachm of Laudanum administered, he was directed to effect a medium protrusion. Placing him upon his knees, and throwing his trunk well across a chair, an assistant forced the nates well aside, so as to expose the tumor's base. With a long, large needle, made for the purpose, and loaded with a strong, and rather large whip cord, the two ends of which were kept even, one being colored with ink, the base was now transfixed perpendicularly, so as to carry the needle, and of course the two cords, through a ring, attached to a handle by a shaft, and carried up into the cavity of the tumor. The ring was now pulled out, bringing with it, of course, the white and black cord. These were now cut in two; giving four ends hanging from the interior, and an equal number from the exterior. In the same manner, a transfixion was now made, in a horizontal direction, doubling the number of ligatures hanging from the interior, and exterior, respectively. By a little reflection, it will be seen, that by tieing two vicinal strings of the same color, which hang from the inside, then drawing on the extremities of the same which hang from the outside, the entire ring of protruded tissue, constituting the base, may be ligated and strangulated in four parts, which will be equal, if the transfixions are accurate. Furthermore, it will be observed that the traction necessary to the induction of strangulation, acts equally *toward* and *from* the centre of the anus, and that accordingly it is not occluded, by the operation. After its completion, the index finger could, readily, be passed within the ligatures.

Two grains of opium were now administered, and the patient was placed in bed. Decided prostration, with great restlessness and tenesmus, continued for seven hours. It was the intention to allow the tumor to remain extruded. Frequently, within these hours, however, the patient pushed it up into the rectum, but was obliged

to force it down as often. From the liberal exhibition of opium he passed a comparatively comfortable night. Twenty-one hours after the operation the tongue was dry, rough, and brown ; patient occasionally vomited ; pulse 95 ; protruded mass black, insensible, apparently sphacelated. Having entertained the propriety of cutting off the mass, as soon as adequate security was afforded against the occurrence of hemmorrhage, to test the state of the part, light incisions were now made at various points on the surface. These were followed, within an hour or two, by serious hemmorrhage, bringing the actual cautery into requisition.

Twenty-eight hours after the operation, the pulse had reached 128 per minute : at the end of 45 hours it numbered 114 ; and vomiting, which had been a prominent and distressing symptom, had subsided.

At the end of four days the pulse was 96 per minute ; patient was resting fairly ; had but little pain, and was relishing very fair supplies of food. At this time the protruded mass was distinctly shaken, synchronously with the pulse. The skin about the anus, perineum, and nates, seemed perfectly healthy.

From this time, to the end of the eighth day, there was no change worthy of note. Spacelation of the summit, with separation of the slough, leaving about one-half of the length of the tumor, had now occurred, leaving a surface, which exhibited a degree of sensibility and vascularity, not admitting of the reasonable expectation of further sloughing from the first ligation. The ligatures were accordingly withdrawn. Ulceration had occurred about them to such an extent that the orifices from which they were withdrawn, would readily admit of the introduction of a finger. The intervening masses of tissue, embraced within the ligatures, were reduced to the size of a finger, and were very dense. A curved prope, armed with a ligature, was now passed readily around these masses, and they were subjected to a second ligation.

From the 9th to the 11th day, inclusively, the patient was much more comfortable than at any previous time. Previous to this time the catheter was in daily requisition, but urination was now readily effected. The pulse ranged at about 80 : patient rested well, with almost perfect exemption from pain ; on each of the two latter days, there were fecal evacuations. *Discharges of flatus were present from the first, and throughout.*

On the 13th day, three of the ligatures, last applied, had separated. Daily fecal evacuations had occurred for several days : the remain-

ing ligature, and the remnant of the protruded mass were about ready to come away, and the general condition of the patient was, in every way, such as not to admit of a remaining doubt as to the complete success of the operation.

Remarks.—I am not aware that this operation, or anything resembling it, has ever been performed. In speaking of the case of a soldier, who had a similar prolapsus, Brodie makes a similar remark, as to *his* personal knowledge. Erichsen gives directions for the performance of ligation in prolapsus, which evidently, however, are only applicable to slight, or moderate cases. It is desired to fix particular attention upon the fact, that while the above mode of ligation is well calculated to effect strangulation, *it did not cause occlusion of the anus, flatus escaping throughout, and fecal evacuations occurring quite regularly after the ninth day,* and were intentionally prevented, previous to that time, by the liberal exhibition of opium.

Mary Ann Decrow, et. al, vs. *H. H. Little.* *A Prosecution for alleged Mal-Practice.* Tried at the October Term, 1859, of the Morgan Common Pleas; Hanna, Linn & Tompkins, Attorneys for Plaintiffs; Goddard, Wood & Evans, Attorneys for Defendant. Reported by Wm. A. Brown, Student of Medicine.

There was reported in the Journal for September, a case, *McQueeney* vs. *Jones,* of prosecution for alleged mal-practice in the treatment of an injury of the ankle joint, with fracture of the fibula, the plaintiff claiming $10,000 damages. An almost precisely similar case has occurred in our common pleas, a report of which I am about to make.

This suit was instituted for the recovery of damages to the amount of ten thousand dollars, for alleged mal-practice. The plaintiffs aver and complain of carelessness, unskillfulness and negligence in the treatment of a fracture of the fibula and dislocation of the tibia inwards, with fracture of the tip of the internal maleolus. In the petition, the plaintiffs claim that the "defendant, regardless of his duty in the premises, so carelessly, unskillfully and negligently set and reduced the fracture and disjointed ankle, bound up and bandaged the same, &c., and wholly in consequence of such unskillfulness, the limb is crooked and *shorter* than in its natural

state, that the ankle is stiff and she unable to use or move the same, &c., and therefore pray damages."

The defendant claimed that all the material allegations of the plaintiff's petition, upon which they predicate their demand for damages, were untrue. That he did not undertake absolutely to cure and heal the same. That it was untrue he conducted himself carelessly, &c., or that in consequence of any want of care or skill on his part, the leg was crooked or shorter, or the ankle stiffened, as in the petition alleged.

The Case.—The witnesses summoned by plaintiffs, stated in substance, "that Mary Ann Decrow, on the 25th of February, 1856, fell and fractured the small bone of her left leg, and dislocated her ankle. That Dr. Little was sent for, who reduced the luxation and dressed the parts with splints and bandages. That he next day removed the dressings, stating that he feared the consequence of any further continuance of the same—inflammation, &c. That he did not re-apply the splints until after ten days; that in the meantime the pain and swelling increased. That when he first dresssed the parts he ordered cold water to be applied constantly. That he did not again apply the splints for over twenty-four hours at any time thereafter. That the patient was confined about three months, in consequence of her injury. That the ankle is yet swollen and painful, and that the *leg is shorter* than the other." The plaintiffs called no medical witnesses.

Gen. Goddard, attorney for defendant, claimed a non-suit, and moved the court to dismiss the case, on the ground that plaintiffs had failed to make out a case in law. Court overruled the motion.

Several witnesses called by defendant, stated that plaintiff had danced since the accident to her limb. That her lameness was only observable when attention was called to the fact. Dr. Little said he was called to treat a fracture as stated. He reduced the luxation, adjusted the bones, applied splints and rollers, and ordered cold applications. Next morning he was called and told that pain had been severe. On examination, he found the parts much swollen and painful, and discovered that vesicles were making their appearance over the point of fracture, and about the ankle. The limb was cold, pulseless, with great extravisation of blood, and blotches of discoloration on the surface. He threw off his dressings and applied warm fomentations and stimulants, to arouse circulation and restore vitality to the parts, and dressed by *position;* he continued this prac-

tice. Thereafter, the patient being much annoyed by spasmodic twitching of the muscles, he applied the splints to restrain the jerking and ascertain if the limb would bear any pressure. Twelve hours after, examined the limb; vesication increased and tendency to gangrene more apparent; limb very much discolored and cuticle in places sloughed away and serum oozing and dripping from it. Again threw aside appliances and dressed by position, employing antiseptic and emolient applications.

He said, in answer to the questions of the attorneys, that the result of the continuance of bandages and splints would have been gangrene, and loss of limb. That fractures of the kind, from their nature, are very dangerous, and that we can never expect a perfect cure. He referred them to the statistics of Dr. Hamilton, of Buffalo,* where it was given in one table, 9 imperfect and 2 perfect, out of 11 cases. He said it was a physical impossibility for the limb to be shorter than the other, unless the tibia had been broken, which was not the fact in this case. (The foot being depressed and the joint partly anchylosed, gave the plaintiff the impression of its being shorter—she not being able to bring the heel to the floor when she stands erect.)

Prof. Hamilton, being called, said he was professor of surgery in Starling Medical College. He said that the practice of Dr. Little in the case met with his entire approbation; his course being one that would have been pursued by every intelligent, well-read physician or surgeon. (The Professor here explained to the jury the nature and danger of such dislocations and fractures, in a simple and highly satisfactory manner.) He said he had examined, with other physicians, the limb of Mrs. Dean, and found the limb that had been fractured about seven-twelfths of an inch larger around than its fellow of the opposite side. He said the bones were in their place, save a *very* slight depression of the fibula at the point of fracture, which is beyond the control of surgeons by its position, and in all cases of this kind is found more or less depressed. It cannot be manipulated without an unnecessary operation, to which few persons

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*See *Transactions of American Medical Association*, 1855, 6 & 7. That admirable and valuable Report of Frank Hastings Hamilton, M. D., *On Deformities after Fractures*. Dr. Hamilton has now a work in press, which will embrace these papers, by permission of the Association; the book will be published in a very short time by Blanchard & Lea, and should be secured by every member of the profession who desires information on a subject never before thoroughly investigated.

would be willing to subject themselves. He said he found the joint somewhat stiffened, but which depends upon circumstances beyond our control. The leg was in nowise shorter than its fellow; he made six or seven measurements of the fibula and tibia of each limb, and discovered no variation of length. He said that *imperfect* is the rule, *perfect* the exception. (*Ham. Rep. Trans. Am. Med. Ass.*) The Professor then, on the question being asked, said that Dr. Hamilton of Buffalo was the best authority in the West, and probably in the nation, on the subject of deformities after fractures; said that Ferguson was recognized as a standard work on surgery.

Dr Brown, being called, said that the practice of Dr. Little was commendable. That he had examined the limb and met with the same results as Professor Hamilton, as to size, anchylosis of the joint, &c. In short, that he concurred fully in the views expressed by Dr. Hamilton.

Eighteen physicians being then called, successively concurred in the views of the preceding medical men. The case was submitted without argument. The Court charged the jury: 1st. That the medical man engages that he possesses a reasonable degree of skill, such as is ordinarily possessed by physicians. 2d. He engages to exercise that skill with reasonable care and diligence. 3d. A medical practitioner is not responsible for the result, or does not insure the result. The jury, being out a few minutes, returned with a verdict for defendant.

This was a case in surgery where the indications for treatment were plain, and such as would mislead no man posted in his profession. The continuance of the fracture dressings would certainly have been attended with gangrene, and dressing by position was the only treatment to be adopted by an intelligent man. The adjustment is a good one, and one with which any surgeon may be well satisfied; *there is no deformity* other than the slight swelling still remaining, and were it not for the partial anchylosis, the leg would be fully as good as its mate. But how are we to control this anchylosis dependant on a high degree of inflammation of the synovial surfaces of the tibio-tarsal articulation, when the constant movement we would naturally recommend, fails to arrest its progress? Yet I have heard of instances—and, in truth, they are frequent in medico-legal annals—where anchylosis remained after injuries to the joints, of members of the medical profession *advising prosecution* of the surgeon, communicating to the patient, in ostenta-

tious ignorance, the astounding information that his stiffened joint is the result of bad management and unpardonable neglect? Happily, and to the honor of an intelligent judiciary, be it said, prosecutions for mal-practice in our State are not as they were once, and physicians are protected in the exercise of a sound judgment and the application of a noble science. It is very seldom we hear of an instance of the plaintiff in these suits recovering his damages; and in the majority of cases the trial is a most amusing farce to intelligent men. But whence comes these prosecutions? No patient will prosecute his surgeon without medical advice; and it is to be feared they are often caused by envy, rivalry and jealousy among medical men—an opportunity being offered to sneer at a rival, and assert or *hint* a superior wisdom.

McConnelsville, O., Oct. 23.

Obstetric Novelties. Delivery of a full grown, living, healthy, child, and a three or four months fœtus in peculiar circumstances. Rupture of the uterus not entering os uteri—delivery through rupture into vagina: By Jos. S. Burr, M. D., of Port Washington, Ohio.

Notwithstanding I have been in the constant practice of medicine for the last 38 years, and have aimed to keep posted in the progress of the profession, yet every now and then some *new* or more than usually interesting cases occur to me; two of which, (of recent date) I will here present, and which, if you think they will interest your readers, you may give place to in your Medical and Surgical Journal.

On the 1st of this month I was called to a lady in labour with her second child. At first nothing special was observed, except the great size and uncommon hardness of the abdomen. The pains were few and far between, and seemed rather inefficient; but upon examination I found the os-tinca dilated to size of silver dollar or more, and continued to dilate gradually for some twelve or fourteen hours, weak as the contractions were. The pains then gradually abated in frequency and in force more than previously, until I prescribed ten grain doses of equal parts of cimicifugin and caulop-

hyllin* twenty minutes apart, until three doses were taken, which aroused the organ to sufficient expulsive force, and when the os-tinca dilated to nearly full size, and finding no *bag* of water, but a tense *globe* thereof, and nothing else that could be reached, I ruptured the membranes and let off say a pint of fluid, much to her comfort. Although the head had not yet engaged in the pelvis, yet the next pain *flooded the child to the world.* I presume that I have delivered 2000 women, but never before have I witnessed anything like such a quantity of liquor amnii. Fearing syncope, I ordered another powder given in brandy, and kept up unceasing and heavy manipulations over the uterus, and found it more inclined to contract than could have been expected from her exhausted condition. No hemorrhage occurred. When the system reacted sufficiently, the usual efforts were made to deliver the placenta, but without success. The hand was then introduced, and by long continued efforts detached it from the fundus. Though no new job to me, yet this was the most critical one of the kind I ever met with—the adhesions were so strong.

When cleared, my uniform habit is to introduce the fingers, to know that all is left right; in doing which, on this occasion, I came in contact with an uncertain something in the vagina. Tracing it upwards, in the right posterior part of the uterus, a *hard* shell-like something was found, and it being questionable, whether it was in the *wall* of the uterus, or *attached* to the inside surface thereof, an effort was made to ascertain if it could be separated therefrom; but it could not without inflicting more distress than prudence justified. I left it for the time being, came down to the loose parts below, and finding that a portion thereof could be brought without the vulva, did so, and called for a light, and found it to be the foot of another fœtus of some four or five months development. Then tracing up its spine, I found my finger on that hard, shell-like substance, and *within* a tough membranous sack, which with much difficulty was torn so as to get that hard thing out, and deliver it, which I found to be the *head* of the fœtus; but so compressed and flattened, that the parietal bones must have been nearly or quite in contact with each other. That tough envelop around the head I could not disengage from the womb, but it came away on the fourth day sponta-

*I like this combination far better than the ergot, which, when it acts at all, is too powerful, producing strong *spasmodic* and continued action, generally injurious to the child, and frequently so to the mother. This acts more physiologically, and does not so destroy the susceptibility of the uterus, should it be requisite to repeat it in a short time.

neously, and the woman did well in all respects. No envelopment of the body or any thing like plecenta was discovered, but I presume something of the kind existed, for there was a piece of umbilical cord attached to the fœtus.

The first child delivered was of full medium size, and healthy. The little one I will send you in a day or two, with the request that it be placed in the College Cabinet. To many it will be a curiosity, in more respects than one. If a head is essential to animal life, how could this fœtus be developed even to the extent you find it, with the head so compressed and flattened? From what cause was it thus flattened? Suppose that you open one side of the head and see if it contains any brain. Since it was delivered the head has spread out considerably laterally. When was it probably conceived? If both were conceived at the same time, how are we to account for the disparity of development? If a subsequent conception, how shall we reconcile it with the popular teachings of physiologists?

I have long been seeking more light, and would be pleased to see the views of others relative to this case, and especially as to the little fœtus.

Ruptured Uterus.—On the 16th of October, the wife of Wm. Pace was taken in labour for the fourth time, at each of which some complication existed, of which I have personal knowledge, from having twice delivered her myself.

She was a German woman of medium stature, of good general health, quite corpulent, with the longest and most *flabby* and pendulous abdomen, (whether pregnant or not,) I ever saw, and when at full period was enormous in size, the abdomen reaching nearly to her knees when sitting.

The following history was given me:

At the time expected, she was taken in labour quite actively, and sent for a neighboring midwife, who informed me that on arriving, "I found Mrs Pace in bed, with heavy pains in quick succession, and on examination found the head low down, requiring but half the length of finger to reach it. I ordered her to get up until the bed was fixed, which she did, and had several pains whilst on her feet, with a woman under each arm. When she came to get into bed, a very strong pain took her, and she kneeled down, with arms on bed, (which was unusually high,) and screamed out, *the waters have broken.* I got her in bed as soon as possible, and found she was

wasting some, and some blood was on the floor, but I could not reach the child any more. The pains then mostly ceased, but she complained of smarting, heat and misery all through the belly, therefore I sent for Dr. Portmess, of Newcomerstown."

At the bed side, in that constrained and stretched condition, leaning forward, the fundus of the uterus would, no doubt, fall forward in that relaxed and pendulous abdomen, with ostinca to the sacrum, and then and there was ruptured.

Dr. Portmess stated, that on arriving, he perceived nothing very peculiar, and therefore waited some hours to see if the uterus would not rally again, in natural labour. But finding it would not, gave her *freely* of ergot, which produced no effect, save vomiting of green fluid. He then, on examination for vagina, found the ostinca well dilated and soft, but nothing presenting, therefore, easily passed the hand fully into the uterus, and found it empty, with a rupture from fundus to near the neck, the child, fuids, and placenta having escaped into the abdomen. He then had me sent for, (10 miles) expecting that I would open the abdomen.

On arriving, I found the abdomen extremely large and exquisitely tender on pressure, especially about the umbilicus, which I was informed had been the case for some months, to some extent, the patient frequently emiting a green fluid, which became darker and thicker as time elapsed. Considerable prostration existed.

On examination for vaginam I found the ostinca so closed that a half hour's effort failed to enter it. Then I passed the hand upwards, without any obstruction, until the child was reached and its position ascertained. In this condition we consulted, whether it would be best to withdraw the hand and leave her to her inevitable fate, open the abdomen externally and extract the child, &c., or deliver from where I was. The last was concluded upon. Accordingly, I brought down one foot, and by and by the other, and delivered it without difficulty, (except the head in pelvis, which took some time) and that too *outside of* the *uterus*. Then in like manner found and delivered the placenta. No hemorrhage. Being obliged to go to Columbus next day, I left her in charge of Dr. Portmess, informing all who inquired, that she probably would not recover. On my return, I learned that she lived five days, and then died with all the symptoms of strangulated bowels, which probably was the case.

The inducement in reporting this case, is, that I suppose it contains some *new* features in obstetrics. I have read considerable, had some experience in cases of ruptured uterus, but if any case is on record where the fœtus and secundines were delivered through the vagina, and yet *outside of the womb,* I have never learned it.

On the sphacelation and separation of parts by the use of the ligature, pressure, &c. A clinical lecture, by Prof. J. W. HAMILTON, at the Surgical Clinic of Starling Medical College for Wednesday, Dec. 21. Reported by T. B. HAMILTON, A. B., Student of Medicine.

Several cases, and some disappointments, which have been experienced in our clinics of late, have tended to fix attention upon the subject of the sphacelation and separation of parts by the use of the ligature. Within the last few weeks, by the use of the ligature, we have removed seven hemorrhoidal tumors. Although several of these were large for this kind of tumor, yet the amount of tissue ligated in even the largest tumors of this kind, is slight. In all the cases operated upon, after pulling the tumor well down we have transfixed its base, or pedicle, and ligated in two lateral halves. It has been the aim in these ligations to make the strangulation immediate and perfect, and thus deprive the parts of vitality at once. In this class of cases the success has been perfect, sphacelation occurring at once, and separation having occurred at an average of about six days, in every case. Ligation, for the purpose of inducing sloughing in vascular tumors, other than hemorrhoidal, has been performed in two instances, when the amount of tissue ligated, although moderate in amount, was much greater than in these cases of piles. One of these tumors, you will recollect, was situated over the left parietal bone, in a child 12 weeks old. It was about 9 by 15 lines in extent. In that case, using a small, but very strong and inelastic flaxen thread, all the power I could command was used in tightening the ligatures. You saw the case a week subsequently; all was sphacelated except a point apparently equal to one-fifth of the surface of a finger nail. A letter from the father, written six weeks after the operation, informs me that the scab had separated, and that the cure is evidently perfect, except at

the point alluded to, where a relict of the original tumor of the extent of a five cent piece, and undoubtedly included within my ligature remains, showing, that in these apparently favorable circumstances, and with the force applied, some portion of the moderate amount of tissue included within the ligature, still escaped complete strangulation.

The other case, alluded to above, is the one in which a vascular tumor of the size of a plum, forming a kind of proboscis, was removed from the upper lip of a child five months old, by the use of the ligature. You will recollect the unsuccessful effort that was made to separate the integument from it, by the use of the knife. This having failed, you will readily recollect the plan and mode of execution of the operation. A well curved needle, loaded with a long, double ligature, similar to the above, was used. The lip and tumor being well everted, the alveolar attachment of the frenum, and the entire lip, close to the nasal spine and nasal septum, were transfixed, the thread drawn through a few inches, and then cut, so as to free the needle. This was now loaded with one of the ligatures that hung from the mouth, and thus loaded the lip was transfixed from the inside, external to the tumor, and a little below a point intermediate to the upper point of transfixion and the prolabium. The other ligature hanging from the mouth was used in the same manner. In this way a V shaped portion of the lip, embracing the tumor, was divided into four nearly equal parts, and ligated as often. These ligatures again were applied with the utmost tension. Yet you will recollect that a small portion of the tumor, probably included within the ligature, required a second ligation.

Again: In the case in which we ligated for anal prolapsus, we had an instructive experience. The circumference of the mass, as shown by careful measurement, was 10½ inches. But it is to be borne in mind that this was by no means the size of the mass to which the ligature was applied. While the mass which rolled out from the anus, in adjusting itself upon the circumjacent parts, was of this size, it is to be borne in mind that the part actually ligated was at the bottom of a deep fissure, which existed between the everted mass and the skin, and that its diameter in reality was about that of the anus in a distented condition, and probably not over from 16 to 18 lines. The plan of the operation was such that this mass was ligated in four equal parts. You will recollect that the hands were wrapped with dry cloths to protect them and prevent the ligature from

slipping. and that every possible physical resource of the operator was brought into requisition in tightening them. The next day the absence of sensibility and the color of the surface seemed plainly to indicate that sphacelation had already occurred. Light incisions, scarcely amounting to more than scarrification of the mucus membrane, were, notwithstanding, followed by copious hemorrhage; indicating that while the return of blood *from* the the ligated structures, was, at least seriously interfered with, its passage *into* them was still effected with facility, and even rapidity.

Accordingly, the death of the parts as the result of this first ligation, did not occur. Partly as the effect of this ligation, and partly as the result of the application of the actual cautery, to arrest the hemorrhage alluded to, about one half of the mass below the ligatures sloughed away, leaving the rest as vascular as ever. To complete the process of mortification, a second ligation was made through the original orifices on the eighth day after the first. This did its work efficiently and promptly.

In this connection, and in the way of explanation, there is another point I wish to impress upon your minds. In performing the usual operation for varicocele, we ligate with firmness, subcutaneously or otherwise, the parts constituting the spermatic cord, exclusive of the vas deferens. The parts are ligated in their continuity, and in their normal relation to surrounding structures. The ligature is applied firmly, is kept on for several days, and then removed. Now, in these circumstances what is the fact, or, rather what is the theory, as to the continuance of ulceration, ultimating in the division of the cord. In a word, it is supposed that the parts, included within the ligature, cease to separate by ulceration, when the ligature is withdrawn. The object of the operation is to occlude the spermatic veins. This is attained, accordingly, by the induction of inflammation, and the effusion and organization of lymph. A legitimate practical deduction, from the theory of this operation, is, that parts even firmly ligated, do not necessarily die, and slough, even within the grasp of the ligature, where that ligature is removed within a few days.

Brodie gives an interesting observation, bearing upon this point. He undertook the removal of a tumor involving a portion of the tongue, by the firm ligation of it. Twenty-four hours afterwards he observed that the patient still seemed to suffer a great deal. It occurred to him that inasmuch as the parts were already dead, he would

lose nothing by cutting his ligatures, while, by so doing, he hoped to relieve his patient's sufferings. He accordingly removed them. A day or two afterwards he was greatly surprised to find that the tumor retained its vitality, and that a repetition of the ligation was necessitated.

This observation of Brodie, and what I have said in reference to the theory of the operation for varicocele, do at least something, in the way of affording us an explanation of the partial failures, attending the above ligation for prolapsus, and those for vascular tumors. Take the case of prolapsus. Supposing that the ligation was effectively performed, why was it, that the death of the part ligated, was not effected?

In offering you an answer to this question, I must ask you to bear in mind that the mass included within each ligature was large; that, furthermore, this mass consisted of mucus membrane, and cellular tissue, with blood vessels; the leading constituent being cellular tissue. The whole made a soft and compressible mass. You will recollect that of all the tissues, the cellular mortifies, and ulcerates with much the greatest rapidity; and that the blood vessels are very slow thus to separate.

Now these facts, duly considered, are supposed to afford an adequate explanation When these ligatures were applied, the circulation, was pretty much suspended. Ulceration of the cellular tissue, however, occurred within the grasp of the ligature, before they were dead, beyond recuperation, to such an extent as to slacken the ligatures, and allow not only of the ingress, but also of the egress of blood; effecting, really, just what Brodie did when he removed his ligature prematurely.

The same explanation applies, to a greater or less extent, to our ligation of vascular tumors. In these cases, however, there were other circumstances entering into the explanation, of which it is not proposed to speak at present.

Now, the object of these remarks is to fix and impress upon your minds a practical precept. In undertaking to effect the separation of parts, by the use of the ligature, endeavor so to plan your operation, as to divide the tissue to be ligated, into as many, and consequently as small parts, as possible. Select a small round ligature; one that is sufficiently strong, and perfectly inelastic. Then, in the application of it, be sure, not only to include all the tissue to be sphacelated within it, but that it is applied with the requisite degree of firmness.

Now, in saying all this, it is difficult to be too emphatic. But I can see that this emphasis is eminently calculated to lead you into difficulty, in another direction. You have, perhaps, already concluded, that if it is so difficult to produce the death of parts as this, that but little is to be apprehended from any ordinary circumstances by which they are compressed or strangulated, or their circulation interfered with. It would quite probably lead, sooner or later, to serious difficulty, should you assume the responsibilities of practice with any such impression. To impress this upon your minds, let me allude to a few cases.

In another connection, you were shown a mortified index finger, the history of which was as follows:

It had been the seat of an aneurism by anastomosis. It was supposed that the aneurismal tumor could be separated from the skin, the leading vessels supplying it ligated, and the rest strangulated by the ligature, &c. After the operation was commenced, the hemorrhage was so profuse, and the ligation of the leading vessels above had so little effect, that a compress of lint was applied, over which a bandage, a half inch wide, was placed, with moderate tension, with a view to arrest the hemorrhage by pressure. Three days subsequently, on removing that bandage, it was found to inclose the mortified finger shown you.

Again: A practitioner in northern Ohio, in regard to whose standing and skill I am not informed, wounded the humeral artery in performing venesection. He undertook to remedy the difficulty in the ordinary way, *i. e.*, by the use of a compress upon the wound, supported by a roller bandage commencing at the tips of the fingers. The arm mortified, an amputation was performed, and a successful prosecution for mal-practice grew out of it.

Again: An enterprising practitioner in Washington county, was called a distance, in circumstances not permitting him to provide himself with surgical instruments, to see a man who had cut the muscles, constituting the calf of the leg, down to the bones, with a mowing scythe. There was profuse hemorrhage from large vessels. For the want of instruments, he could not control the hemorrhage by tieing, according to the rule. He accordingly prepared a firm compress, which he supported in contact with the cut surface with a bandage, so as to control the hemorrhage. The result, however, was mortification, amputation, and an unsuccessful prosecution for mal-practice.

These cases, in which mortification was unintentionally or acci-

dentally induced, stand out in very striking contrast with our cases in which the direct and thorough application of the ligature failed to cause it. Why should it occur with such apparent facility in our set of circumstances, and with so much difficulty in another?

It is not easy to make an explanation, covering the whole ground. Yet, in the two classes of cases, given above, there are some general facts, which go far toward it. In the first class of cases the parts to be strangulated are quite proximally related to the centre of the circulation; so that they have, as variously shown in surgical practice, a high standard of vital tenacity. In the same class of cases, soft parts, only, are included within the compressing or constricting ligature; and finally, the arteries and veins are subject to every manner of distribution in the ligated, or compressed mass, and are as likely to be found in the centre of it as elsewhere, and consequently protected, to some extent, from severe compression.

In all the cases constituting the latter class, the part involved is the distal portion of an extremity. They are, consequently, distally related to the centre of the circulation, and, as a consequence, have, as variously shown again, a comparatively low standard of vital tenacity. Furthermore, the part compressed in these cases, in its simplest idea, consists of a large cylinder of bone, surmounted by a stratum of soft parts. In the deeper part of this stratum of soft parts—in other words, in close connection with bone run the main arteries. In the superficial part of it, *i. e.*, in close relation to the compressing agent, the bandage, the veins which return the greater part of the blood, are disposed. In the contemplation of these circumstances we find an adequate explanation.

The standard of vitality is such, in the latter class of cases, as that so great a cause is not necessary to the production of a given effect. Then the physical circumstances in which the arteries and veins are placed, are most favorable for their occlusion, being placed between two firm substances, the bone within, and the bandage without; and, finally, it is to be borne in mind that in all the cases, leading vessels were injured, and their circulation interfered with, in the outset.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

Memoir of Priestley. Read before the National Institute of France by M. CUVIER, June 27, 1805. [Translated by C. A. ALEXANDER.]

[The discourses by which the French Academy of Sciences is accustomed to commemorate its deceased members, whether native or foreign, constitute, it is known, a body of highly interesting biographical and scientific literature. Far from being limited to encomium, as the title of "Eloges," by which they are usually called, might suggest, they maintain a tone of candid criticism, and in dispensing justice to scientific discoverers, deal in enlarged and original views of science itself. The names of their authors—of Delambre, Fourier, Cuvier, Arago and others—would teach us to expect no less.

Those delivered by Arago, late perpetual secretary of the academy, have been recently translated and published in England among the works of that distinguished and lamented individual. A few others may be found dispersed through the volumes of scientific periodicals of Great Britain, but as these are little accessible to the general reader, and as many have not been translated which well deserved to be so, it has been thought that a more extended collection than has yet appeared would not be unacceptable to the literary public.

In this view, a translation, not indeed of the whole series, but of such as, having not been already published in this country, may serve to give a connected and popular exposition of the progress of science, has been undertaken at the suggestion of the Secretary of the Smithsonian Institution; and the proposed work will appear under the auspices of the Institution, in so far, at least, as to guarantee the correctness of its views and the fidelity of its execution.

As a specimen of the work, as well as for its own intrinsic interest, the following memoir of one of the most original and ingenius promoters of modern science, who closed his eventful life in our own country, is appended to the present report.]

JOSEPH PRIESTLEY, the subject of the present discourse, was an English clergyman, whose important discoveries in physics occasioned his being chosen a foreign associate of the Academy of Sciences of Paris, and the National Institute lost no time in associating him with itself by the the same title.* As he belonged besides to most scientific academies of his time, it may be that the homage which we this day render him has been already offered to his memory in all the great capitals of the civilized world.

This unanimity of commendation will appear the more encouraging to the friends of enlightenment, and attest more strikingly the

* The Academy of Sciences, with its kindred bodies, having been suppressed by a decree of the convention in 1793, was replaced in 1795 by the National Institute, divided at first into classes, which, on the restoration of the monarchy, again received the name of academies.—TR.

irrepressible influence of true merit, when it is considered that he who was its object used no address or management in securing it; that, on the contrary, his life was one of almost ceaseless controversy; that he seemed on all occasions to take pleasure in contesting the most accredited opinions, and attacked without scruple the most cherished interests of certain classes of men.

It is true that this excessive ardor in the assertion of his own ideas drew upon him the bitterest resentments, exposed him to all sorts of calumny, and more than once rendered him the victim of cruel persecution. A mob, excited by the false reports of his enemies, snatched from him in a single day the fruits of all his labors, and only by withdrawing from his country did he succeed in baffling the fury of his persecutors. But when his own countrymen seemed to forsake him, there were others eager to offer him an honorable asylum. And now, when the principal literary institution of a nation at war with his own, tenders him through my voice the last sad tribute which it owes to all its members, I see among the audience many to whom Priestley has been heretofore opposed, who yet seem to join their suffrages with mine, and crown by their generous concurrence the measure of his triumph.

Science and philosophy will have nothing to fear from their bigoted adversaries so long as such a recompense shall await the man who has enlarged the noble edifice of our knowledge; so long as genius shall be regarded apart from its merely local relations, and the development of new truths shall procure indulgence for any incidental waywardness, singularity, or even rashness of opinion; for it must not be dissembled that in matters of opinion Priestley has made himself liable to exceptions of this nature.

In effect, his history will exhibit him in the light, as it were, of two different—I had almost said, two contrasted—individuals.

One, the circumspect observer of nature, confines himself to the examination of objects which lie within the domain of experience, subjects every procedure to a strict and cautious logic, indulges neither in speculation nor prejudice, but seeking only truth, whatever it may be, seldom fails to discover and to establish it in the most satisfactory manner: the other shows us the adventurous theologian, who grapples boldly with the most mysterious questions, rejects authority, however consecrated by the respect and belief of ages, and, abandoning himself to the heat of controversy, with opinions formed in advance, evinces as much solicitude for the success as concern for the validity or even consistency of his hypotheses. The former calmly resigns his discoveries to the examination of the learned, and finds them received without hesitation, and his own merit acknowledged without contradiction: the latter invests himself in the warlike panoply of erudition and metaphysics, attacks with little discrimination whatever sect or dogma presents itself, and too often revolts the conscience by the aggressive zeal with which he seems bent on subduing it.

It is against the divine, the minister of peace, that all are in arms; he is accused of exciting animosity, arousing vengeance, and troub-

ling society. The physical inquirer, on the other hand, meets with invariable respect; every one acknowledges that, in the defence of truth, he relies only upon reason, that his discoveries are directed solely to the welfare of his fellow-men, and that his writings breathe nothing but a spirit of candor and of modesty.*

Thoroughly to know Priestley, then, it is necessary that he should be sketched under both these characters; that the theologian, metaphysician and politician should be reproduced, no less than the ingenious physicist and associate of the National Institute. At the same time there can be no mistake as to the comparative prominence which should be given, on the present occasion, to one or the other, and as little probably as to the interest which posterity is likely to attach to them. He has himself somewhere remarked that, as a means of lasting renown, the labors of science are as far superior to all others as the laws of nature to the organization of societies; and that no statesman who ever rose to power in Great Britain has approached in celebrity its Bacons, Newtons, and Boyles; a maxim somewhat exaggerated, perhaps, but which it would have been fortunate if he had always kept before his own eyes Priestley, however, is not the first celebrated man whose judgment has shown itself incapable of mastering his character.

Meanwhile, it is to be carefully noted, that in no respect did his divergent opinions influence his conduct, but that, with the exception of the unmerited misfortunes which overwhelmed him in old age, the whole course of his life was alike uniform and simple. The mere list of his works would indicate as much; for when it is known that he produced more than a hundred treatises, no one can suppose that society engrossed much of his time, or that his history can consist of much more than an analysis of his writings.

He was born at Birstal-Fieldhead, near Leeds, in 1733. His father was a cloth-dresser; his first master a dissenting minister. After several years study he obtained the situation of [tutor in the Belles Lettres†] at the provincial academy of Warrington, and afterwards became pastor of a congregation of dissenters at Leeds. Lord Shelburn, secretary of state, and afterwards first marquis of Lansdowne, under a sense of Priestley's merit [which had then been established by his first discoveries] induced him to accept the position of [his lordship's librarian and philosophic companion, with a salary of £250, reducible to £150 for life should he quit the employment.] This connexion was terminated, without loss of confidence or friendship on either part, at the end of seven years, and Priestley resumed his pastoral functions among the dissenters at

* Whether the contrast here presented be not pushed, in the spirit of antithesis, to too great a length, will probably be differently decided, according to the previous views of the reader. But that, in some of his metaphysical speculations and interpretations of prophecy, Dr. Priestley has laid himself open to the charge of temerity, will be denied by few; nor is it surprising that Cuvier should regret that such astonishing activity of intellect had not been restrained to the paths of induction, where he himself had found so secure a footing.—Tr.

† The words within brackets are from Lord Brougham's "Lives of Philosophers of the time of George III."

Birmingham. Here he remained eleven years, up to the time of the disturbances which compelled him to quit that city, and determined him to seek a refuge in the United States. Such is the brief, yet complete, outline of his private life; the history of his works, as it is more important, must be more extended.

The first of them were intended for the service of education, and an English grammar, his earliest production, is still used in the schools of Great Britain. His historic and geographic charts deserve to be used everywhere for the ingenious manner in which they represent the origin and fall of each State, and the career of every celebrated man. His lessons on history evince both the comprehension and knowledge requisite for a profitable study of the revolutions of nations. Those on oratory and criticism are recognized as useful guides to the exercises of the young.*

This didactic form was that which he still employed in his first works on physics; his histories, namely, of electricity and optics, and his elements of perspective. The history of electricity was judiciously timed, for it appeared just when Franklin, by the boldness and success of his investigations, had thrown the brightest lustre around this interesting branch of physics, and as all that had been done up to that date was here presented in a clear and concise form, it was translated into several languages, and first drew some notice in foreign countries to the name of its author.

The ungrateful task, however, of recounting what had been done by others was not long to limit the activity of Priestley He proceeded without loss of time to place himself in the line of physical discoverers, and it was chiefly by his researches into the different kinds of air that he merited that title, and established the most durable monument of his own renown.

It had long been known that many bodies give out air and that others absorb it under certain circumstances. It had been observed that the air of neglected privies and of the bottoms of wells, with that evolved by fermentation, extinguishes light and destroys animal life. A light air, also, had been observed in the interior of mines, floating mostly about the vaults of the passages, and kindling sometimes with fearful explosions. The former had received the name of *fixed* and the latter that of *inflammable* air. They are the same which we now call *carbonic acid* gas and *carburetted hydrogen*. Cavendish had determined their specific gravity; Black had ascertained that it is the fixed air which renders the alkalies and lime effervescent; and Bergman had not been backward in detecting its acid properties. Such was the state of knowledge in these particulars when Priestley laid hold of the matter and treated it with a felicity altogether peculiar to himself.

Happening to be lodged, at Leeds, next door to a brewery, he had the curiosity to examine the fixed air which is exhaled from beer in

* Referring to these productions, Lord Brougham remarked: "It is difficult to imagine anything more adventurous than the tutor of an academy afflicted with an incurable stutter, and who devoted his time to teaching and theology, promulgating rules of eloquence to the senators and lawyers of his country."

fermentation, with reference to its deleterious influence on animal life and its property of extinguishing the flame of candles.

His experiments having given him some remarkable results, he was induced to extend them to inflammable air.

In aiming to determine all the circumstances in which these two kinds of air manifest themselves, he soon remarked that in many instances of combustion, especially during the calcination of metals, the air in which such operations are conducted is altered in its nature, without there being either fixed or inflammable air in the product. Hence his discovery of a third species of deleterious air, which he named *phlogistic air*, and which has been since called *ozotic* (or nitrogen) gas.

He had availed himself of small animals to test the pernicious action of these different products, and was thus obliged to give pain to sentient beings. His character is displayed in the joy which he felt when the discovery of a fourth species of gas enabled him to dispense with this cruel expedient. This was *nitrous air*, which has the property of suddenly diminishing the volume of any other with which it mixes, very nearly in the proportion in which that other air is respirable, and which consequently affords the means of measuring to a certain point the degree of salubrity possessed by different kinds of air.

This discovery, which was the origin of that branch of physics known as eudiometry, was of great importance; all the natural sciences were interested in possessing such a measure, and medicine, above all, might have turned it to account but for the difficulty of introducing scientific processes into the practice of even the most scientific arts.

Combustion, fermentation, respiration, and putrefaction are found to produce sometimes fixed air, sometimes inflammable, and sometimes phlogistic air. There is thus no end to the causes which may vitiate the atmosphere, and yet its purity has undergone no sensible alteration during all the time those causes have been acting. Hence it follows that in nature there must exist some constant means of restoring that purity.

Priestley detected these means in discovering that vegetables posses the property of decomposing fixed air during the day, and that they thus purify the atmosphere. This property, besides being the first key to the whole vegetable economy, when taken in connexion with that exerted by animals of vitiating the air by respiration, disclosed then, what has since been better developed, that the restorative energies of life consist chiefly in a perpetual transformation of elastic fluids

Thus these discoveries respecting air opened an altogether new field to the researches upon living bodies, and shed a light on physiology and medicine till then unknown. But still more unexpected and brighter rays were soon to issue from the same focus.

Having applied the heat of a burning-glass to the calx of mercury, Priestley had the good fortune to obtain, in a pure and isolated state, that respirable constituent of atmospheric air which animals con-

sume, vegetables restore, and combustion alters. He named it *dephlogisticated air.*

The other aeriform fluids which differed from the atmospheric air had been found to extinguish lights: this caused them to burn with a brighter flame and with wonderful rapidity. The others deprived animals of life: in this they lived longer than in even the common air, without need of renewing it, while their faculties seemed to acquire from it a greater energy. For the instant it was imagined a new means of existing, and perhaps of prolonging life, had been discovered, or at least an assured remedy against the greater part of the maladies of respiration.

This hope has proved deceptive, but dephlogisticated air has not the less remained one of the most brilliant discoveries of the eighteenth century; it is this which, under the name of oxygen, modern chemistry regards as one of the most universal agents of nature. By its means all combustion and calcination are effected; it enters into the composition of all acids; it is one of the elements of water, and the great reservoir of fire; to it we owe almost all the artificial heat which we procure in common life and in the arts; this it is which, in respiration, gives to all animated bodies their natural warmth, and furnishes the material principle of their movements. The energy of different kinds of animals is in proportion to the force of its action upon them, and in the growth of vegetables there is no period when they do not combine with or disengage it in different manners. In a word, physics, chemistry, and physiology, both animal and vegetable, have scarcely a phenomenon which they can entirely explain without the element in question.

What has been said is but a slight sketch of the most remarkable discoveries of Priestley; time forces us to neglect a multitude of others which would of themselves furnish ample materials for the eulogy of another man. Each of his experiments has proved fertile in consequences, and it can scarcely be doubted that there are some of them which only await a closer attention to become the germ of new and important deductions.

His labors, as might be expected, were received with general interest; his works translated into all languages, and his experiments repeated, varied, and commented upon by the ablest inquirers. For his earlier researches on phlogistic air the Royal Society had awarded him Copley's medal, which is bestowed for the most important physical labor made public within the year, and which England regards as the noblest prize of scientific merit. The Academy of Paris accorded him a prize not less noble, and, because rarer, of more difficult attainment, the place of one of its eight foreign associates; an object of competition to all the scientists of Europe, and whose list of names, commencing with those of Newton, Leibnitz and Peter the Great, has never degenerated from that original splendor.

Priestley saw with surprise this accumulation of honors, and modestly wondered at the multitude of precious truths which nature seemed to have reserved for his sole discovery. He forgot that her favors are never gratuitous, and that if she had so freely disclosed

herself, it was because he had known how to extort her answers by the indefatigable perseverance of his inquiries and the number and variety of his expedients. While others sedulously conceal how much they owe to hazard, Priestley seemed inclined to credit it with everything. He tells us, with unexampled candor, how often he was indebted to it unconsciously, how often new substances presented themselves to him without being recognized; nor does he ever dissemble the erroneous views which sometimes governed him, and from which he was only detached by further experience.

These avowals did honor to his modesty, without disarming jealousy. These, whose own views and methods had proved abortive in discovery, called him a mere experimenter, without method or design; no wonder, they observed, if, among so many trials and combinations, some should be lucky.

But the true physicist is not to be duped by such interested criticisms. He is well aware how many efforts it costs to arrive at those happy ideas which are the source and regulating principle of all others; while the very men who have thought fit to augment our admiration of their own great achievements in science by the luminous order in which they propound them, will be far from taking it amiss, that others, like Priestley, have chosen to give us their discoveries just as they made them, and have ingeniously retraced all the windings of the path over which they have traveled.

This peculiarity results from his manner of composition. We have here no finished construction, no digest of theorems rigidly deduced the one from the other, as they may be supposed to present themselves in the conceptions of pure reason. What he has given us is the journal of his thoughts in all the disorder of their succession, wherein we see him at first feeling his way in profound obscurity, spying out the faintest rays of light that he may collect and reflect them, sometimes misled by a treacherous and transient glimmer, but sure to arrive in the end at some region of vast extent and fertility.

Should we be displeased if the great masters of the human race, an Archimedes or a Newton, for instance, had thus admitted us to the confidence of their genius? Newton, when asked how he arrived at his great discoveries, replied: "By long thinking about them." With what pleasure should we not have learned that long series of thoughts by which Newton was conducted to that master thought which has inspired the meditations of all his successors. If his works at present teach us to appreciate the forces of nature, we should, by thus knowing the actual processes of his mind, have been enabled thoroughly to comprehend that noblest of nature's works—the genius of a great man.

We must not suppose, however, that the discoveries of Priestley were all perceived by himself, or that they were set forth in his writings as clearly or in the same manner as we should now state them. At the time of making them he knew no chemical theory but that of Stahl, and this, being founded on experiments in which air was taken no account of, was of course incapable of providing

for its phenomena. Hence there results a degree of hesitation as to principles, and of embarrassment and uncertainty as to results. Seeking everywhere for phlogiston, Priestley is obliged to suppose it differently constituted. He finds it now in fixed air, which is heavy and acid; now in inflammable air, which is light; and again in phlogisticated air, which has no property of the other two. Sometimes there are cases where an accumulation of phlogiston diminishes the weight of the combination and communicates an absolute levity to the mixture; in other cases it produces a directly contrary effect. Thus there is no uniformity, nor is it possible to arrive at any general and precise conclusion.

That conclusion it was left for modern chemistry to draw, and for this purpose it has needed but one or two formulas. *There is no such thing as phlogiston; pure air* (or oxygen) *is a simple substance, as are also phlogisticated air and inflammable air; combustion is only the combination of pure air with combustible substances.* These few words have served to disembroil the chaos; every fact has fallen into its proper place, and chemistry has emerged in the fair and consistent form in which we possess it.

But chemistry, like the gods of the pagans, could create nothing out of nothing; elementary material was still needed for its disposal, and this material Priestley, beyond all others, has furnished. Under this point of view, therefore, he may justly be considered one of the fathers of modern chemistry, and be worthily associated with the authors of that celebrated revolution in science. He was a father, however, who never consented to recognize his offspring.

His perseverance in combatting on behalf of his original ideas has probably no parallel. Without being shaken in his convictions he saw the most skillful defenders of those ideas pass into the opposite camp; and when Kirwan, the last nearly of all of them, abjured the phlogistic doctrine, Priestley, unsupported and alone, still occupied the field and addressed a new defiance to his opponents, the principal French chemists of his time.

This challenge was at once taken up and replied to by Adet, who was then ambassador of France to the United States, and thus proved himself a worthy representative of French chemistry. The new arguments of Priestley against that theory originated, in fact, from his own want of familiarity with the operations of more recent chemistry, however ingenious and dexterous he might be in those processes which he had himself created. When he drew fixed air from substances into which he did not suspect it of having entered, he would deny that it invariably owes its origin to the carbon. And in forming water from oxygen and hydrogen, though a small quantity of nitric acid was always present, he would take no account of the portion of azote which produced it.

His later writings failed, accordingly, to bring back to his opinion any of those who had abandoned it. Like so many others who have endeavored to arrest movements first communicated to themselves, he experienced that ideas once dispersed abroad are as the seed whose product depends upon the laws of nature, and not the will of

those who have scattered them. To which we may add that, when they have once taken root, no human power is any longer capable of eradicating them.

It remains now to trace, with painful interest, the career of Priestley in that other branch of his labors to which reference has already been made. We have just seen him marching from one success to another in the cultivation of the merely human sciences, which he looked upon only as the employment of his leisure moments. We must now observe him engaged in the struggle to unveil those first principles which the nature of things hides from our reason beneath the folds of impenetrable mystery, striving to force the world into an acceptance of his conjectures, consuming almost his whole life in these fruitless efforts, and sinking at last into an abyss of misfortune.

Every indulgence will be here needed, as well for the recital as its subject. It may even appear to some that such details are out of place before this audience; but where else ought the admonition they afford to be listened to with more interest?

It has been already said that Priestley was an ecclesiastic; it must now be added that he passed successively through three creeds or forms of belief, in arriving at one which he could conscientiously adopt as the basis of his teachings.

Reared in all the severity of the Presbyterian communion, which is called Calvinistic in France, he passed at the age of twenty years into the ranks of Arianism. * * * * Arianism, while holding Christ to be a creature, regards him as a Being of superior nature, produced before the world, and himself the organ of the Creator in the production of other beings. It is the doctrine which the "Paradise Lost" has invested with so magnificent a garb of poetry. Priestley professed it for a length of time, and then abandoned it to become what we should call in France, a Socinian. Few, perhaps, of those who hear me know in what these two sects differ; but the Socinians deny the pre-existence of Christ, and regard him only as a man, though they revere in him the Saviour of the world. This subtle distinction between two creeds occupied for thirty years a head which the most important questions of science might rightfully have claimed, and was to Priestley the occasion of incomparably more pages than he has written on the different kinds of air. * * * * * * Nor was he less peculiar in the metaphysical part of his creed. It seems to have been demonstrated by the sounder metaphysics of modern times that it is impossible for the thinking substance to take direct cognizance of its own proper nature, just as it is impossible for the eye to see itself. For any such purpose, to contemplate itself or compare itself with other existences, it should be able to do so from without, while it is only within and through its own peculiar modifications that it perceives, or receives the impression of those existences Priestley either overlooked or disregarded these conclusions. In his views, Scripture and experience agree in making the soul material; the fibres of the brain are the depositary of the images produced by the senses, while the power which these fibres possess of communicating

their vibrations to one another is the source of the association of ideas. Sensation perishes with the body, but will revive with it at the day of resurrection, in virtue of the will and power of God. Till then we shall sleep in absolute insensibility; the distribution of punishments and rewards awaits us only thereafter.*

A material soul must necessarily be submissive to exterior impulses, and thus absolute necessity, not free will, becomes the law of our determinations If rewards and punishments are attached to our conduct, it is only to give one more determining cause in favor of virtue.

These doctrines are, many of them, those of the earlier Socinians, to which Priestley only brought the support of new arguments. Without stopping to discuss questions so foreign to the ordinary studies of the Academy, and which it is enough to have briefly recalled, it is proper to say that he sustained his opinions with but too much skill. Even his adversaries give him credit for great erudition and singular dexterity in combining and disposing of his resources, and look upon him, therefore, as one of the strongest controversialists and enemies of orthodoxy in these latter times. * * * *

It might be thought that in rejecting so many opinions, Priestley had but one more step to take to fall into the most absolute incredulity. But this he never did; on the contrary, it seemed to please him to occupy in theology, as in physics, a post by himself, which, however perilous, he distrusted not his own courage or ability to defend. Those who went farther than himself, or not so far, the orthodox and the skeptical, were alike the objects of his attack, and wherever, in all Europe, anything appeared which seemed to menace, in the least degree, either revelation in general or his own manner of interpreting it, *that* he felt himself called upon to refute. His activity in this species of warfare was without bounds; atheists, deists, Jews, arians, quakers, methodists, calvinists, church of England men, the catholics, were all taught to recognize him as an opponent. There are publications of his against each of these forms of belief, the very titles of which it would be almost endless to recite.

A proof that all this was done in good faith is the fact that he thought himself authorized to predict from Scripture events that were near at hand. Prophets who have not his confidence take care to postpone the accomplishment of their productions, so as not to have them falsified during their own lifetime. But Priestley felt more secure of his facts; he published, in 1799, an address to the Jews, in which he announced to them, from the revelations of Daniel and St. John, their speedy re-establishment in Palestine, with a re-

* It should be remarked that the above is far from being an accurate representation of the materialism of Priestley, which should not be confounded with the grosser forms of that doctrine. He had adopted the theory of Boscovich, as presented in the *Theoria Philosophiæ Naturalis*, &c., in 1758, according to which matter consists in emanations of force from definite portions of space, and is in reality devoid of any other substratum —Tr.

union of all creeds and the foundation of a reign of glory. Besides the calculation according to years, which referred this great event to the commencement of the nineteenth century, it was to be heralded by such tokens as the destruction of the papal power, of the Turkish empire, and of the kingdoms of Europe. The French monarchy, firm as it seemed, had already fallen; the rest would soon follow; the Pope was dethroned and in exile; the Turk only subsisted through the compassion of his neighbors. Priestley lived long enough to see the failure of at least a part of these supposed tokens.

Details like these, however extraordinary, could not be passed in silence, for the *eloges* of the Academy are historic, and, as was expressly prescribed by the first and most illustrious of our predecessors, are bound on every occasion to a fair exposition of the *pro* and *con*. Nor can it be otherwise than useful to observe, as in the present example, to what lengths the finest genius may be misled when it attempts to overleap the limits which Providence has ascribed to our understanding. There is even more instruction in the errors of such a man as Priestley, than in his actual misfortunes; for where is the generous mind that would not suffer even greater misfortunes than his if it were only sure of having announced truth and vindicated right?

Yet it was not precisely the theology of Priestley which occasioned his misfortunes; in England every one dogmatises as he pleases. It was his politics, too closely allied to that theology; the politics of dissenters being in almost every case the politics of opposition.

We have been accustomed, in France, to consider protestants as republicans from religion; they are only so from oppression. In Ireland it is the catholics who pass for republicans, while the protestants, who rule, are royalists, because the king is of their party. The natural opposition is more vehement in England than elsewhere, precisely because there dissenters are tolerated by halves, and only by halves. Excluded from honors and employment, they are constrained to the rigid payment of tithes for a form of worship which is not their own. Their children are not even admitted into the national universities, and yet, influential both from their numbers and wealth, they are left at full liberty to assemble, to debate, to print —to exercise, in fact, every means of inflaming their resentments.

For thirty years Priestley was the most eloquent, bold and persevering organ of their grievances. He put forth twenty volumes in this service. In this service solely did he write against the celebrated treatise in which Burke predicted in so true and startling a manner the evils which must flow from the French revolution Apparently the object of Priestley's reply was not well understood in France, for he owed to this his nomination as French citizen and member of the convention, two titles which, at that time, seemed to sit but ill on so warm a defender of revelation and universal toleration. The first he did not decline, but the exercise of the second was evaded on the plea that he did not sufficiently understand the French language.

Without pronouncing as to the substance, it must be conceded that the political writings of Priestley unite a rare moderation in terms to a consistency of principle not less rare. He asks nothing for dissenters which he does not equally ask for catholics, and with more urgency for the latter as the greater sufferers. No catholic has more vividly painted the oppression under which nine-tenths of the Irish people labor.

I know not what gratitude the catholics may have evinced for these efforts of a unitarian in their behalf, but this extension of his good will had no tendency, we may well conceive, to reconcile him with the Anglican party. To the high churchmen he had become by these means the object of a concentrated hostility; those who wrote against him were held in peculiar favor, and in some cases were, on this very account, rewarded with prelacies; which led Priestley pleasantly to observe "that he might be considered as holding the portfolio of such benefices in his own hands." But the aversion he inspired did not stop within these venial limits; there is too much reason to think that the popular turbulence of which he was the victim was greatly fomented by the intemperate writings and discourses of ministers of the establishment.

The first movements of the French revolution had at that time wrought division, not only in France, but in all the States, cities, and even families of Europe. As yet there was no outbreak but in France, but men disputed everywhere, and, strange to say, it was precisely in the freest countries that the greatest ardor for revolution manifested itself. Under these circumstances, the partisans of the British government had recourse to means of which the enemies of government in France were setting a successful example, and prompted the popular riots by which the revolutionists, or those suspected of being such, were assailed.

Not the least formidable of these riots was that which occurred at Birmingham, July 14, 1791. A banquet was given on that day by persons of different sects, including some episcopalians, to celebrate the anniversary of the attack upon the Bastile, and it was reported that Priestley was the chief promoter of the festival. As his enemies had spared no means of inflaming the popular mind, resorting even to the fabrication of tickets of invitation replete with sedition, and of toasts steeped in criminality or absurdity, a heated crowd is soon collected; the calumny circulates and is aggravated by the most odious imputations; and the tavern finally, where the guests are assembled, is assaulted and sacked. The furious multitude exclaim aloud against Priestley; he is the organ of dissent, the file leader of revolution, the man against whom has long been levelled the hatred of every true friend of his country. The moment has arrived when they can avenge themselves.

The unfortunate philosopher, so far from participating in the dinner, was ignorant of what was imputed to him and of all that was passing in the city. But an excited rabble listens to nothing; they conclude that he has taken flight, and proceeded with torches and other instruments of destruction to his mansion.

This was a modest retreat, half a mile in the country, where he lived with his wife and two sons in the simplicity of ancient manners. Here it was that he had received the homage of men illustrious by birth or merit, none of whom would have been content to leave England without seeing him; and here, for eleven years, he had divided his time between the pursuit of science, the instruction of youth, and the exercise of that charity which he considered the first duty of his ministry.

Here there was only one ornament to be seen, only an incomparable one; the rich collection of instruments, in great part devised and constructed by himself; the focus from which had radiated so many new truths, and which had diffused inestimable benefits among those who now rushed to its destruction; for these were almost all artisans of Birmingham, and among the numerous manufactures of that city, there is scarcely one which does not owe some improvement in its processes to the discoveries of Priestley.

But what avails gratitude against the spirit of party, or does the people know ought of services of this kind? All was laid in ashes; apparatus, in which experiments designed for the solution of important questions had been for months in process of development, records of the observations of many years, works in course of preparation, a large library, enriched with notes, additions and commentaries, were, in a few moments, with the house itself, utterly destroyed.

It was truly afflictive that such a man should thus see the fruits of forty years of honorable assiduity and wise economy suddenly snatched away—a loss not merely of his moderate fortune, which he might have disregarded, but of the works of his hand, the conception of his genius, the fund which he had reserved for the meditations and employment of his remaining life. Fortunately, his family had been apprised of the approach of the mob, and had withdrawn him in time from the dreadful spectacle.

The riot continued three days, and the houses of his friends underwent the same fate with his own. As usual, it was the victims who were accused, and the public journals failed not to announce that there had been discovered among the papers of Priestley the proofs of a wide-spread conspiracy.

This calumny is sufficiently refuted by the fact that he openly resided two years more near London, in the college of the dissenters at Hackney, where he succeeded the celebrated Dr. Price in the professorship of chemistry. There was time enough to bring him to justice, and no want of zeal on the part of his accusers, if there had existed the slightest proof.

They confined themselves to painting him in the most odious colors in political pamphlets and periodicals. Few instances can be found of such overflowing rancor, nor would it be easy to credit this rage of defamation against a man who conferred so much honor on his country, had we not before our eyes the examples which the last fifteen years have furnished of the power of party spirit to envenom men's opinions, and those which the last fifteen centuries exhibit of

the fury with which personal crimination may be urged when the pretext is religion.

Nothing in the character of Priestley seemed calculated to produce such hostility; his sentiments were never influenced by his controversies, as might be shown by his friendly intimacy with Dr. Price, though they had often written against each other. So far from any turbulence or haughtiness of manner, his conversation was always noted for the same modesty which pervades his writings, and nothing was easier with him than to say, *I do not know*—words which the generality of professedly learned men find it so difficult to pronounce. His countenance bore rather the impression of melancholy than of animation, though he was by no means indifferent to the company of his friends, and enlivened their intercourse with a natural and becoming gaiety. This man, so profound in many parts of science, passed several hours of each day in teaching the young. This was with him a favorite occupation, and his pupils still revere his memory with filial tenderness, many of them with genuine enthusiasm.

But no consideration could induce him to pause when he thought there was some truth to be defended, and this trait of character, so admirable in itself, destroyed the effect of more amiable qualities and constituted the torment of his life; because he carried it to exaggeration, and because he forgot that reasoning is the least of the means which must be used to make men adopt opinions which conflict with their habits of thought or temporary interests.

The insults heaped upon him, and the fear of again compromising the lives and fortunes of his friends, at last made a sojourn in his own country intolerable. In his new engagements at Hackney, industry and patience might repair, as they had already in part repaired, the disasters of Birmingham; but this consideration was not sufficient to detain him; and as coming to France during the war would have given countenance to the charges of his enemies, he could see no chance of repose except in the United States of America. Yet was it some time before he found it even there; English prejudices followed him beyond the seas, and not until the accession of Jefferson to the Presidency was he free from the apprehension of being obliged to quit that asylum.

The dedication of his Ecclesiastical History to that great magistrate, in acknowledgment of the tranquility restored to him, and the reply of Jefferson, afford a noble specimen of the relations which may subsist between men of letters and men in place without humiliation to either.

Priestley proposed to consecrate the rest of his life to the work just mentioned, in which he intended to comprise the development and proofs of all his theological opinions; but he was arrested at the fourth volume by a fatal accident. His food, by some unknown means, proved one day to have been poisoned; * his whole family

* The statement made here, as well as in some other works, of the poisoning which occasioned the decline and death of Dr. Priestley, rests on little or no authority.—*Translator*.

was placed in jeopardy, and his own health languished from that time forward. A gradual decay terminated his life after three years of suffering. He died at Northumberland, in Pennsylvania, February 6, 1804.

His last moments were marked by the effusions of the same piety which had animated him through life, and which, from not being well regulated, had occasioned all its errors. He caused the Gospels to be read to him, and thanked God for having granted him a useful life and peaceful death. Among his chief blessings he ranked that of having personally known all his celebrated cotemporaries. "I am going to sleep like you," he said to his grandchildren, who were brought to his bed-side; "but we shall all awake together," he added, looking towards the attendants, "and I trust to everlasting happiness." These were his latest words, and they bear witness to the belief in which he died.

Such was the end of a man whom his enemies accused of wishing to subvert all religion and morals; but whose chief fault was to have misconceived his vocation, and to have attached too much importance to his private sentiments in matters where the most important of all sentiments must be the love of peace.

[Note.—We are informed by Lord Brougham that, on settling at Warrington, "Priestley married the daughter of Mr. Wilkinson, a respectable iron master in Wales. She was an amiable woman, and endowed with great strength of mind, which was destined afterwards to be severely tried." By her he had three sons and one daughter, of whom the youngest son, Henry, the peculiar companion of his father's agricultural labors at his new home, in Pennsylvania, died at the age of eighteen, in 1795. The mother died ten months later. "These blows," says Lord B., "though he felt their weight, did not at all crush him; his resignation was exemplary, and his steady, enthusiastic faith in revelation gave him a certain hope of meeting, before many years should elapse, with those whom he had lost. It was, indeed, quite evident that religion was as much an active principle in him as in any one who ever lived. Not only is it always uppermost in his thoughts, but he even regards temporal concerns of a public nature always in connexion with the Divine superintendence, and even with the prophecies of Scripture. His letters are full of references to those prophecies as bearing on passing events, and he plainly says that, since his removal to America, he should care little for European events but for their connexion with the Old Testament. He also looked for an actual and material second coming of Christ upon earth."

The descendants of Dr. Priestley appear, from an account received through the courtesy of a grandson, Joseph R. Priestley, to be widely dispersed. Not only do several of them remain in his native country, at London and Birmingham, but others are to be found at Northumberland, Pennsylvania, where he settled in this country; at New Orleans; at Atlanta, in Georgia; and even at Melbourne,

in Australia. He was buried at Northumberland, and the following is the inscription on his tomb :

To

The memory of the Reverend

Dr. Joseph Priestley,

Who departed this life on the 6 Feb., 1804,

Anno ætatis LXXI.

"Return unto my rest, oh my soul, for the Lord hath dealt bountifully with thee : I will lay me down in peace and sleep till I awake in the morning of the resurrection."]

Alexander von Humboldt.

Alexander von Humboldt died at Berlin on Friday the 6th of May, having been ill with a severe catarrh, accompanied with fever, since the 17th of April.

Eulogy by Prof. Agassiz, before the American Academy of Arts and Sciences, delivered on the 24th of May.

Gentlemen :—I have been requested to present, on this occasion, some remarks upon the scientific career of Humboldt. So few days have elapsed since the sad news reached our shore, that I have had no time to prepare an elaborate account of that wonderful career, and I am not myself in a condition in which I could have done it, being deprived of the use of my eyes, so that I had to rely upon the hand of a friend to make a few memoranda on a slip of paper, which might enable me to present my thoughts in a somewhat regular order. But I have, since the day we heard of his death, recalled all my recollections of him; and, if you will permit me, I will present them to you as they are now vividly in my mind.

Humboldt (Alexander von Humboldt, as he always called himself, though he was christened with the names of Frederick Heinrich Alexander] was born in 1769, on the 14th of September, in that memorable year which gave to the world those philosophers, warriors and statesmen, who have changed the face of science and the condition of affairs in our century. It was in that year that Cuvier also and Schiller were born; and, among the warriors and statesmen, Napoleon, the Duke of Wellington and Canning, are children of 1769—and it certainly is a year of which we can say that its children revolutionized the world.

Of the early life of Humboldt, I know nothing; and I find no records except that in his tenth year he lost his father, who had been a major in the army during the seven years' war, and afterwards a chamberlain to the King of Prussia. But his mother took excellent care of him, and watched over his early education. The influence she had upon his life is evident from the fact that notwithstanding his yearning for the sight of foreign lands, he did not begin to make active preparations for his travels during her lifetime. In the winter of 1787–88, he was sent to the University of Frankfort, on the Oder, to study finance. He was to be a statesman; he was to enter high offices, for which there was a fair chance, owing to his noble birth and the patronage he could expect at the court. He remained, however, but a short time there.

Not finding those studies to his taste, after a semestre's residence in the University, we find him again at Berlin, and there in intimate friendship with Willdenow, then professor of botany, and who at that time possessed the greatest herbarium in existence. Botany was the first branch of natural science to which Humboldt paid especial attention. The next year he went to Göttingen, being then a youth of twenty years; and here he studied natural history with Blumenbach; and thus had an opportunity of seeing the progress zoology was making in anticipation of the great movement by which Cuvier placed zoology on a new foundation. For it is an unquestionable fact, that in first presenting a classification of the animal kingdom, based upon a knowledge of its structure, Blumenbach, in a measure, anticipated Cuvier; though it is only by an exaggeration of what Blumenbach did that an unfair writer of later times has attempted to deprive Cuvier of the glory of having accomplished this object upon the broadest possible basis. From Göttingen he visited the Rhine, for the purpose of studying geology, and in particular the basaltic formations of the Seven Mountains. At Mayence he became acquainted with George Forster, who proposed to accompany him on a journey to England. You may imagine what an impression the conversation of that active, impetuous, powerful man made upon the youthful Humboldt. They went to Belgium and to Holland, and thence to England, where Forster introduced him to Sir Joseph Banks. Thus the companions of Capt. Cook in his first and second voyages round the world, who, already venerable in years and eminent as promoters of physical science not yet established in the popular favor, were the early guides of Humboldt in his aspirations for scientific distinction. Yet Humboldt had a worldly career to accomplish. He was to be a statesman, and this required that he should go to the Academy of Commerce at Hamburg. He remained there five months, but he could endure it no longer, and he begged so hard that his mother allowed him to go to Freyburg and study geology with Werner, with a view of obtaining a situation in the administration of mines. See what combinations of circumstances prepare him for his great career, as no other young man ever was prepared. At Freyburg he received the private instruction of Werner, the founder of modern geology, and he had as his

fellow student no less a man than Leopold von Buch, then a youth, to whom, at a later period, Humboldt himself dedicated one of his works, inscribing it "to the greatest geologist," as he was till the day of his recent death. From Freyburg he made frequent excursions to the Hartz and Fitchtelgeberg and surrounding regions, and these excursions ended in the publication of a small work upon the Subterranean Flora of Freiberg [Flora Subterranea Fribergensis], in which he described especially those cryptogamous plants, or singular low and imperfect formations which occur in the deep mines. But here ends his period of pupilage.

In 1792 he was appointed an officer of the mines (Oberbergmeister.) He went to Beyruth as director of the operations in those mines belonging to the Frankish provinces of Prussia. Yet he was always wandering in every direction, seeking for information and new subjects of study. He visited Vienna, and there heard of the discoveries of Galvani, with which he made himself familiar; went to Italy and Switzerland, where he became acquainted with the then celebrated Professors Jurine and Pictet, and with the illustrious Scarpa. He also went to Jena, formed an intimate acquaintance with Schiller and Goethe, and also Loder, with whom he studied anatomy. From that time he began to make investigations of his own, and these investigations were in a line which he has seldom approached since, being experiments in physiology. He turned his attention to the newly discovered power by which he tested the activity of organic substances; and it is plain, from his manner of treating the subject, that he leaned to the idea that the chemical process going on in the living body of animals furnished a clue to the phenomena of life, if it was not life itself. This may be inferred from the title of the book published in 1797—"Uber die gereizte Muskel und Nerven faser, mit Vermuthungen über den chemischen Process des Lebens, in Thieren und Pflanzen." In these explanations of the phenomena we have the sources of the first impulses in a direction which has been so beneficial in advancing the true explation of the secondary phenomena of life, but which, at the same time, in its exaggeration as it prevails now, has degenerated into the materialism of modern investigators. In that period of all-embracing activity, he began to study astronomy. His attention was called to it by Baron von Zach, who was a prominent astronomer, and at that time was actively engaged upon astronomical investigations in Germany. He showed Humboldt to what extent astronomy would be useful for him, in his travels, in determining the positions of places, the altitude of mountains, etc.

So prepared Humboldt now broods over his plans of foreign travel. He has published his work on the muscular and nervous fibre, at the age of twenty-eight. He has lost his mother; and his mind is now inflamed with an ungovernable passion for the sight of foreign, and especially tropical lands. He goes to Paris to make preparation, by securing the best astronomical, metereological and surveying instruments. Evidently he does not care where he shall go, for on a proposition of Lord Bristol to visit Egypt, he agrees to

it. The war prevents the execution of this plan, and he enters into negotiations to accompany the projected expedition of Capt. Baudin to Australia; but when Bonaparte, bent on the conquest of Egypt, started with a scientific expedition, Humboldt wishes to join it. He expects to be one of the scientific party, and to reach Egypt by way of Barbary. But all these plans failing, he goes to Spain with the view of exploring that country, and finding perhaps some means of joining the French expedition in Egypt from Spain. While in Madrid he is so well received at the court—a young nobleman so well instructed has access everywhere—and he receives such encouragement from persons in high positions, that he turns his thoughts to an exploration of the Spanish provinces of America. He receives permission not only to visit them, but instructions are given to the officers of the colonies to receive him everywhere and give him all facilities, to permit him to transport his instruments, to make astronomical and other observations, and to collect whatever he chooses; and all that only in consequence of the good impression he has made when he appeared there, with no other recommendation than that of a friend who happened to be at that time Danish minister to the court of Madrid. With these facilities offered him, he sails in June, 1799, from Corunna, whence he reaches Teneriffe, makes short explorations of that island, ascending the peak, and sailing straightway to America, where he lands in Cumana, in the month of July, and employs the first year and a half in the exploration of the basin of the Orinoco and its connection with the Amazon. This was a journey of itself, and completed a work of scientific importance, establishing the fact that the two rivers were connected by an uninterrupted course of water. He established for the first time the fact that there was an extensive low plain, connected by water, which circled the high table land of Guiana. It was an important discovery in physical geography, because it changed the ideas about water courses and about the distribution of mountains and plains in a manner which has had the most extensive influence upon the progress of physical geography. It may well be said that after this exploration of the Orinico, physical geography begins to appear as a part of science. From Cumana he makes a short excursion to Havana, and hearing there of the probable arrival of Baudin on the west coast of America, starts with the intention of crossing at Panama. He arrives at Carthagena, but was prevented, by the advance of the season, from crossing the Isthmus, and changed his determination from want of precise information respecting Baudin's expedition. He determines to ascend the Magdalena River, and visit Santa Fè de Bogôta, where, for several months, he explores the construction of the mountains, and collects plants and animals; and, in connection with his friend Bonpland, who accompanied him from Paris, he makes those immense botanical collections, which were afterwards published by Bonpland himself, and by Kunth after Bonpland had determined on an expedition to South America. In the beginning of 1802, he reaches Quito, where, during four months, he turns his attention to every thing worth investigating, ascends

the Chimborazo to a height to which no human foot had reached any where; and, having completed this survey, and repeatedly crossed the Andes, he descends the southern slope of the continent to the shore of the Pacific at Truxillo, and following the arid coast of Peru, he visits finally Lima. I will pass lightly over all the details of his journey, for they are only incidents in that laborious exploration of the country which is best appreciated by a consideration of the works which were published in consequence of the immense accumulation of materials gathered during those explorations. From Lima, or rather from Callao, he sails in 1802 for Guayaquil and Acapulco, and reaches Mexico in 1803, where he makes as extensive explorations as he had made in Venezuela and the Andes, and after a stay of about a year, having put all his collections and manuscripts in order, revisits Cuba for a short time, comes to the United States, makes a hurried excursion to Philadelphia and Washington, where he is welcomed by Jefferson, and finally returns with his faithful companion Bonpland, to France, accompanied by a young Spanish nobleman, Don Carlo de Montufar, who had shared his travels since his visit to Quito.

At thirty-six years of age Humboldt is again in Europe with collections made in foreign lands, such as had never been brought together before. But here we meet with a singular circumstance. The German nobleman, the friend of the Prussian and Spanish courts, chooses Paris for his residence, and remains there twenty-two years to work out the result of his scientific labor; for, since his return, with the exception of short journeys to Italy, England and Germany, sometimes accompanying the King of Prussia, sometimes alone, or accompanied by scientific friends, he is entirely occupied in scientific labors and studies. So passess the time to the year 1827, and no doubt he was induced to make this choice of a residence by the extraordinary concourse of distinguished men in all branches of science, with whom he thought he could best discuss the results of his own observations. I shall presently have something to say about the works he completed during that most laborious period of his life I will only add now, that in 1827 he returned to Berlin permanently, having been urged of late by the King of Prussia again and again to return to his native land. And there he delivered a series of lectures preparatory to the publication of Cosmos; for in substance, even in form and arrangement, these lectures, of which the papers of the day gave short accounts, are a sort of prologue to the Cosmos, and a preparation for its publication.

In 1829, when he was sixty years of age, he undertakes another great journey. He accepts the invitation of the Emperor Nicholas to visit the Ural Mountains, with a view of examining the gold mines and localities where platina and diamonds had been found, to determine their geological relations. He accomplished the journey with Ehrenburg and Gustavus Rose, who published the result of their mineralogical and geological survey in a work of which is Rose the sole author; while Humboldt published under the title of Asiatic Fragments of Geology and Climatology, his observations of the

physical and geographical features made during that journey. But he had hardly returned to Berlin, when in consequence of the revolution of 1830, he was sent by the King of Prussia as Extraordinary Ambassador to France, to honor the elevation of Louis Phillippe to the throne. Humboldt had long been a personal friend of the Orleans family, and he was selected as Ambassador on that occasion on account of these personal relations. From 1830 to 1848, he lived alternatively in Berlin and Paris, spending nearly half the time in Paris and half the time in Berlin, with occasional visits to England and Denmark; publishing the results of his investigations in Asia, making original investigations upon various things, and especially pressing the establishment of magnetic observatories, and connected observations all over the globe, for which he obtained the co-operation of the Russian Government and that of the Government of England; and at that time those observations in Australia and in the Russian Empire, to the borders of China, were established, which have led to such important results in our knowledge of terrestrial magnetism. Since 1848, he has lived uninterruptedly in Berlin, where he published, on the anniversary of his eightieth year, a new edition of those charming first flowers of his pen, his Views of Nature, the first edition of which was published in Germany in 1808. This third edition appeared with a series of new and remodeled annotations and explanations; and that book, in which he first presented his views of nature, in which he drew those vivid pictures of the physiognomy of plants and of their geographical distribution, is now revived and brought to the present state of science. The "Views of Nature" is a work which Humboldt has always cherished, and to which, in his Cosmos, he refers more frequently than to any other work. It is no doubt because there he had expressed his deepest thoughts, his most impressive views, and even foreshadowed those intimate convictions which he never expressed, but which he desired to record in such a manner that those that can read between the line might find them there; and certainly there we find them. His aspiration has been to present to the world a picture of the physical world, from which he would exclude everything that relates to the turmoil of human society, and to the ambitions of individual men.

A life so full, so rich, is worth considering in every respect, and it is really instructive to see with what devotion he pursues his work. As long as he is a student he is really a student, and learns faithfully, and learns everything he can reach. And he continues so for twenty three years. He is not one of those who is impatient to show that he has something in him, and with premature impatience utters his ideas, so that they become insuperable barriers to his independent progress in later life. Slowly and confident of his sure progress, he advances, and while he learns, he studies also, independently of those who teach him. He makes his experiments, and, to make them with more independence, he seeks for an official position. During five years, he is a business man, in a station which gives him leisure. He is superintendent of the mines, but a super-

intendent of the mines who can do much as he pleases; and while he is thus officially engaged journeying and superintending, he prepares himself for his independent researches. And yet it will be seen he is thirty years of age before he enters upon his American travels, those travels which will be said to have been the greatest undertaking ever carried to a successful issue, if judged by the results; they have as completely changed the basis of physical science as the revolution which took place in France, about the same time, has changed the social condition of that land. Having returned from these travels to Paris, there begins in his life a period concentrated, critical studies. He works up his materials then with an ardor and devotion which is untiring; and he is not anxious to appear to have done it all himself. Oltmanns is called to his aid to revise his astronomical observations, and his barometrical measurements, by which he has determined the geographical position of seven hundred different points, and the altitude of more than four hundred and fifty of them.

The large collection of plants which Bonpland had begun to illustrate, but of which his desire of seeing the tropics again has prevented the completion, he entrusts to Kunth. He has also brought home animals of different classes, and distributes them among the most eminent zoologists of the day. To Cuvier he entrusts the investigation of that remarkable batrachian, the aœolotel, the mode of development of which is still unknown, but which remains in its adult state in a condition similar to that of the tadpole of the frog during the earlier period of its life. Latreille describes the insects, and Valenciennes the shells and the fishes; but yet to show that he might have done the work himself, he publishes a memoir on the anatomical structure of the organs of breathing in the animals he has preserved, and another upon the tropical monkeys of America, and another upon the electric properties of the electric eel. But he was chiefly occupied with investigations in physical geography and climatology. The first work upon that subject is a dissertation on the geographical distribution of plants, published in 1817. Many botanists and travelers had observed that in different parts of the world there are plants not found in others, and that there is a certain arrangement in that distribution; but Humbolt was the first to see that this distribution is connected with the temperature of the air as well as with the altitudes of the surface on which they grow, and he systematized his researches into a general exposition of the laws by which the distribution of plants is regulated. Connected with this subject, he made those extensive investigations into the mean temperature of a large number of places on the surface of the globe, which led to the drawing of those isothermal lines so important in their influence in shaping physical geography, and giving accuracy to the mode of representing natural phenomena. Before Humboldt, we had no graphic representation of complex natural phenomena which made them easily comprehensible even to the minds of moderate cultivation. He has done that in a way which has circulated information more extensively, and brought it to the

apprehension more clearly than it could have been done by any other means.

It is not too much to say, that this mode of representing natural phenomena has made it possible to introduce in our most elementary works, the broad generalizations derived from the investigations of Humboldt in South America ; and that every child in our schools has his mind fed from the labors of Humboldt's brain, wherever geography is no longer taught in the old routine. Having completed his American labors, Humboldt published three works partly connected with his investigations in America, and partly with his further studies in Europe since his return, and among others, a book, which first appeared as a paper in the "Dictionnaire des Sciences Naturelles," but of which separate copies were printed under the title of "Essai sur la Constitution des Roches dans les deux Hemisphères." This work has been noticed to the extent which it deserved by only one geologist, Elie de Beaumont. No other seems to have seen what there is in that paper, for there Humboldt shows, for the first time, that while inorganic nature is the same all the world over,—granite is granite, and basalt is basalt, and limestone and sandstone, limestone and sandstone wherever found,—there is everywhere a difference in the organized world, so that the distribution of animals and plants represents the most diversified aspects in different countries. This at once explains to us why physical sciences may make such rapid progress in new countries, while botany and zoology have to go through a long process of preparation before they can become popular in regions but recently brought under the beneficial influence of civilization. For, while we need no books of our own upon astronomy, chemistry, physics and mineralogy, we have to grope in the dark while studying our plants and animals, until the most common ones become as familiar to us as the common animals of the fields in the old countries. The distinction which exists in the material basis of scientific culture in different parts of the world, is first made evident by this work. By two happily chosen words, Humboldt has presented at once the results of our knowledge in geology at the time, in a most remarkable manner. He speaks there of "independent formations." Who, before Humboldt, thought there were successive periods in the history of our globe, which were independent one from the other? There was in the mind of geologists only a former and a present world. Those words expressing the thought, and expressing it in reference to the thing itself, for the first time occur in that memoir; thus putting an end to those views prevailing in geology, according to which the age of all the rocks upon the earth can be determined by the mineralogical character of the rocks appearing at the surface. The different geological levels at which rocks belonging to the same period have been deposited, but which have been disturbed by subsequent revolutions, he happily designated as "geological horizons"

It was about the time he was tracing these investigations that he made his attempt to determine the mean altitude of the continents above the sea. Thus far geographers and geologists had considered

only the heights of moutain chains, and the elevation of the lower lands, while it was Humboldt who first made the distinction between mountain chains and table lands. But the idea of estimating the average elevation of continents above the sea had not yet been entertained; and it was again Humboldt, who, from the data that he could command, determined it to be at the utmost 900 feet, assuming all irregularities to be brought to a uniform level. His Asiatic travels gave him additional data to consider these depressions and swellings of continents, when discussing the phenomena of the depressions of the Caspian Sea, which he does in a most complete manner.

There is a fullness and richness of expression and substantial power in his writing, which is most remarkable, but which renders his style somewhat involved. He has aimed to present to others what nature presented to him—combinations interlocked in such a complicated way as hardly to be distinguishable—and his writings present something of the kind. You see his works, page after page, running into volumes without division into chapters or heads of any sort; and so conspicuous is that peculiarity of style in his composition, that I well remember hearing Arago, turning to him, while speaking of composition, and saying, "Humboldt, you don't know how to write a book—you write without end, but that is not a book; it is a picture without frame." Such an expression of one scientific man to another, without giving offence, could only come from a man so intimately associated as Arago was with Humboldt. And this leads me to a few additional remarks upon his character and social relations. Humboldt was born near the Court. He was brought up in connection with courtiers and men in high positions of life. He was no doubt imbued with the prejudices of his caste. He was a nobleman of high descent. And yet the friend of Kings was a bosom friend of Arago, and he was the man who could, after his return from America, refuse the highest position at the court of Berlin, that of the Secretaryship of Public Instruction, preferring to live in a modest way in Paris, in the society of all those illustrious men who then made Paris the centre of intellectual culture. It was there where he became one of that Societè d'Arcueil, composed of all the great men of the day, to which the paper on "Isothermal Lines" was presented, and by which it was printed, as all papers presented to it were, for private distribution. But from his intimate relations, especially to the court of Prussia, some insinuations have been made as to the character of Humboldt. They are as unjust as they are severe in expression. He was never a flatterer of those in power. He has shown it by taking a prominent position, in 1848, at the head of those who accompanied the victims of the revolution of that year to their last place of rest. But while he expressed his independence in such a manner, he had the kindest feelings for all parties. He could not offend, even by an expression, those with whom he has been associated in early life; and I have no doubt that it is to that kindliness of feeling we must ascribe his somewhat in discriminate patronage of aspirants in science, as well as men who

were truly devoted to its highest aims. He may be said to have been, especially in his latter years, the friend of every cultivated man, wishing to lose no opportunity to do all the good of which he was capable; for he had a degree of benevolence and generosity which was unbounded. I can well say that there is not a man engaged in scientific investigation in Europe, who has not received at his hands marked tokens of his favor, and who is not under deep obligations to him. May I be permitted to tell a circumstance which is personal to me in that respect, and which shows what he was capable of doing while he was forbidding an opportunity of telling it. I was only twenty-four years of age when in Paris, whither I had gone with means given to me by a friend; but was at last about to resign my studies from want of ability to meet my expenses. Professor Mitscherlich was then on a visit in Paris, and I had seen him in the morning, when he had asked me what was the cause of my depressed feelings. I told him that I had to go, for I had nothing left. The next morning, as I was seated at breakfast in front of the yard of the hotel where I lived, I saw the servant of Humboldt approach. He handed me a note, saying there was no answer, and disappeared. I opened the note, and I see it now before me as distinctly as if I held the paper in my hand. It said:

"My friend, I hear that you intend leaving Paris in consequence of some embarrassment. That shall not be. I wish you to remain here as long as the object for which you came is not accomplished. I enclose you a check for £50. It is a loan, which you may repay when you can."

Some years afterwards, when I could have repaid him, I wrote, asking for the privilege of remaining forever in his debt, knowing that this request would be more consonant to his feelings than the recovery of the money, and I am now in his debt. What he has done for me, I know he has done for many others, in silence and unknown to the world. I wish I could go on to state something more of his character, his conversational powers, etc., but I feel that I am not in a condition to speak of them. I would only say that his habits were very peculiar. He was an early riser, and yet he was seen at late hours in the saloons in different parts of Paris. From the year 1830 to 1848, while in Paris, he had been charged by the King of Prussia to send reports upon the condition of things there. He had before prepared for the King of Prussia a report on the political condition of the Spanish Colonies in America, which no doubt had its influence afterwards upon the recognition of the independence of those Colonies. The importance of such reports to the Government of Prussia may be inferred from a perusal of his political and statistical essays upon Mexico and Cuba. It is a circumstance worth noticing, that above all great powers, Prussia has more distinguished scientific and literary men among her diplomatists than any other state. And so was Humboldt actually a diplomatist in Paris, though he was placed in that position, not from choice, but in consequence of the benevolence of the King, who wanted to give

him an opportunity of being in Paris as often and as long as he chose.

But from that time there were two men in him—the diplomatist, living in the Hotel des Princes, and the naturalist, who roomed in the Rue de la Harpe, in a modest apartment in the second story, where his scientific friends had access to him every day before seven. After that he was frequently seen working in the library of the Institute until the time when the Grand Seigneur made his appearance at the Court or in the saloons of Paris.

The influence he has exerted upon the progress of science is incalculable. I need only allude to the fact that the Cosmos, bringing every branch of natural science down to the comprehension of every class of students, has been translated into the language of every civilized nation of the world, and gone through several editions. With him ends a great period in the history of science—a period to which Cuvier, Laplace, Arago, Gay-Lussac, Decandolle and Robert Brown belonged, and of whom only one is still living—the venerable Biot.

Fees for Professional Services.

The remuneration for medical, surgical, and obstetrical services have, of necessity, varied very much in different ages and countries, according to the estimate of the services rendered, or the relative value of money. In many countries, towns, and cities there are regular fee-bills, regulating the charges for ordinary practice; a custom which we have always regarded as absurd and unjust, since it places, in this particular, all practitioners, whatever may be their respective merits, upon the same level, whereas every man should be permitted to charge according to his skill and the nature of his services, not forgetting the circumstances of his patients.

In looking, not long ago, over some of our papers, our eye chanced to light upon a bill for professional services rendered by the late Dr. James Craik to Captain G. S., of Washington City, the father of a large and highly respectable family, to one of the members of which we are indebted for this interesting document. Dr. Craik was the physician of Washington, and attended him in his last illness, in conjunction with Dr. Dick. The bill is dated 1795, beginning in April of that year, and ending in March, 1799, the entire amount being £66 16s. 6d. It covers more than ten pages of foolscap, and particularizes every item with the same care as a merchant's or grocer's account. The following extract will serve as a specimen of Dr. Craik's charges:—

	£	s.	d.
For extracting Peter's tooth	0	3	0
Visit to your lady, and anodyne draught	0	3	0
Vial of diaphoretic drops for your son George	0	3	0
A purge	0	1	3

	£	s.	d.
An emetic	0	1	6
For bleeding Capt. S	0	3	0
" delivering your lady	5	0	0
Visit to your son George, and vermifuge pill	0	1	3
32 syphilitic pills for Sam	0	16	0
Visit to your child Harriet, and 2 alterative powders	0	2	0
Visit to your son George, and vermifuge pill	0	1	3
8 ounces of injection for boy Sam	0	5	0
One syringe	0	3	0
Dressing negro boy's hands	0	2	6
Visit to your lady, and anti-rheumatic tincture	0	3	0
Visit to your lady, and opening abscess in breast	0	5	0
Blistering plaster	0	5	0
Bleeding	0	3	0
12 febrifuge powders	0	6	0
6 ounces best olive oil	0	2	6
Bleeding negro woman	0	3	0
" Master George	0	3	0
Dose of salts	0	1	6
Inoculating your child	1	0	0

Emetics, purgatives, absorbent powders, anodyne draughts, and preparations of bark—powder and infusion—are prominent items of the account.

The custom of presenting items in medical bills has, we presume, become obsolete. It is certainly inconsistent with the dignity of a professional man of the present day to descend to such minutiæ. A round statement in dollars should be quite sufficient. Only once, in our whole life, have we been requested so to demean ourselves. We replied, that it was contrary to the habits of professional gentleman to specify their charges, with the minute exactness of an auctioneer's catalogue, at the same time that we informed our *patron* our ledger was at his service; nay, furthermore, that if in future he wanted our attendance on such conditions, he could not have it. The *creature*, now one of the merchant princes of the city where we then resided, had all his life been dealing in sugar, molasses, and whisky, and could therefore not help following the force of his habits.

Professional services are generally much more highly appreciated in cities and large towns than in the country. In the United States, practitioners are much better rewarded in the South and Southwest than in the North and East; in the slave States universally much more liberally than in the free. The reasons for these practices are obvious. In towns and cities physicians could not live if their charges were not higher than they are in the country; and in the Southern regions of the United States money is much more plenty than among the same number of inhabitants in the North and East.

The highest fees for medical services in this country are paid at New Orleans, where the ordinary charge for a visit is from two to five dollars, while consultation services yield at the rate of from ten

to twenty. At Charleston the first consultation fee, established by long habit, is $14.00, the subsequent ones being each $2.00. In this city the first consultation visit is usually $5.00, and those made afterwards $2.00 each. The fees of surgeons are generally, everywhere, higher than those of physicians.

Since our attention has been directed to this subject, we have examined a number of works in our library with a view of ascertaining the charges, ordinary and extraordinary, of practitioners, dead and living, in different countries and in different ages.

In ancient times some remarkable fees were obtained for professional services. It is related of Charmis, who kept a bathing establishment at Rome, in the reign of the Emperor Claudius, that his regular charge for advice to those who were anxious to avail themselves of his treatment was £800. He was the first water-cure doctor, if we may credit the researches of Dr. Doran, that ever practiced, and he made an immense fortune, such as no brother of the craft of the present day can at all approach.

The most liberal fee of modern times was that received by Dr. Dinsdale, a physician of Hertford, England, for inoculating the Empress Catharine, at whose request he visited Russia, in 1768. The operation was perfectly successful, and such was the gratification of the Empress that she made Dinsdale a baron of the empire, besides presenting him £12,000, and a pension of £500 a year.

The largest fee ever received by Sir Astley Cooper was 1,000 guineas. His patient was a man of the name of Hyatt, a retired West India merchant, who was affected with stone in the bladder. The manner in which the fee was presented is worthy of notice. When Hyatt had entirely recovered from the effects of the operation, he requested his surgeon, with his two medical attendants, Dr. Lettsom and Dr. Nelson, to visit him on a particular day. Cooper arrived after the physicians had left the room; he met them down stairs, discussing the liberality of their patient, who had presented each with £300. Sir Astley was cordially received by the old West Indian, and after having chatted a little while, he rose to take his leave, and had got as far as the door, when Hyatt threw his night-cap at him, saying, at the same time, "There, young man, put that into your pocket." Upon examining it, he found a check in it for 1,000 guineas.

Hyatt, it would seem, was equally liberal to his apothecary, or regular family attendant. One day, being sent for in haste to visit his patient, he fell down and hurt his knee, so as to cause him, on entering, to be lame. Hyatt, observing his condition, immediately exclaimed, "Dobson, old fellow, what is the matter?" On learning what the trouble was, he pulled out a £100 bank note, and applied it to the joint, adding that it was the best plaster in the world for a bruised knee.

A wealthy London merchant, Mr. William Cole, paid Sir Astley Cooper annually, for years, £600, for attendance upon his family.

During the hey-day of his professional life Sir Astley Cooper frequently made 100,000 dollars a year by his practice. Much of this

vast sum was received for chamber practice. He had to answer many letters of advice, for which he never received less than a one pound note, while many yielded him five times that amount.

Dr. Lettsom, who was a West Indian by birth, made, in a visit which he paid to Tortala, his native town, soon after having completed his studies in London, nearly £2,000 in five months. After he had succeeded in establishing himself in the British metropolis, his income annually ranged from 20,000 to 25,000 dollars. In 1800, he received, in fees, £12,000, or sixty thousand dollars.

Fothergill, the Quaker doctor, did an immense practice. For the last twenty-five years of his life, his fees annually averaged nearly £7,000, or about 35,000 dollars. He commenced his practice in 1740.

Mead's income was, on an average, from £5,000 to £7,000, for many years. He once received 300 guineas for visiting a patient at Ingestree, in Staffordshire. The patient had been very ill, but recovered before the arrival of his great physician.

Dupuytren's income was enormous; he began life as a poor boy, and died worth more than a million of dollars. Graefe, the celebrated surgeon of Berlin, left an immense fortune, the result of his professional labors.

In this country, physicians are not noted for their high charges or great income. One of the largest fees ever received by any one was that of Dr. Ephraim McDowell for the operation of ovariotomy, performed upon a lady in Tennessee, whose husband gave him $1,500. We have heard of a fee of $5,000 being paid to a New York surgeon for an operation for club-foot, but we are unable to vouch for the authenticity of the story. Physick left a large fortune, but rather in consequence of the rise of his estate than of his large professional emoluments. His charges were generally small. A gentleman once handed him a hundred dollar note for attendance on his wife; but the doctor thinking that it was out of all proportion to the value of his services, returned all but ten dollars

The salaries of court physicians and surgeons have also varied according to the times in which they flourished, and the respective ranks which they occupied. In the reign of Henry III. of France, the pay of the royal household staff was as follows:

First Surgeon.

Ambrose Pare................ 666 livres and 12 sols.

Surgeons-in-Ordinary.

Pierre Pegray................. 333 livres and 6 sols.
Antoine Portail................ 333 " and 6 "

Assistant Surgeons, serving each three months in the year.

January, February, and March.

Jacques Guillemeau...................... 100 livres.
Isaac Bruns.......................... 100 livres.

April, May, and June.

Jehau Lambert	100 livres.
Jacques D'Amboise	100 livres.

July, August, and September.

Ismael Lambert	100 livres.
Hierome De la Noue	100 livres.

October, November, and December.

Charles Buchalier	100 livres.
Michael Vandelon	100 livres.

Louis XIV. seems to have had a high appreciation of the services of his professional attendants. Being affected with anal fistule, an operation became necessary, on recovering from which he exhibited his gratitude by bestowing upon them not less than £14,700, in the following ratio:—

To M. Felix	50,000 crowns	=	£6000.
Dr. Duquin	100,000 livres	=	4000.
Dr. Fagon	24,000 "	=	1000.
M. Bessiere	40,000 "	=	1500.
Four apothecaries, each	3,000 "	=	2000.
M. Raye, apprentice to M. Felix	400 pistoles	=	200.

Considering the enormous price paid for the operation, it is surprising that the filthy disease which it was designed to relieve should ever have become the fashionable court complaint. A surgeon at the present day may regard himself as extremely fortunate if he can occasionally get a patient who is able to pay him two hundred dollars for the division of the sphincter muscles, including the after-treatment.

Scanzoni, professor of midwifery in the University of Wurzburg, received $25,000 for attending, a short time ago, the Empress of Russia in her confinement. The prestige with which the favorable reception of this physician at the Russian court invested him, has rendered him the most celebrated accoucheur of continental Europe, and laid the foundation of one of the most aristocratic practices in the world, crowds of the German and foreign nobility flocking to him from all parts.

Medical men sometimes receive, in addition to their regular fees, large presents, either in money, plate, clothing or wine. Thus, Ambrose Pare, the father of French surgery, at the siege of Metz, in 1552, had a tun of wine sent to him for curing one of the officers of a broken limb, by De La Roch, with a promise that "when it was dronken he would send mee another." The Sultan recently, after his recovery from an attack of ague, in which he was obliged to take an unusual quantity of quinine, the effects of which occasioned symptoms which somewhat alarmed the court, presented his physician, Dr. Caratheodory, precious stones, works of art, and various other articles, valued at between £12,000 and £16,000, besides a handsome estate.

Physicians, on retiring from practice, are sometimes presented with a service of plate by their grateful patrons ; and similar compliments are occasionally paid by towns, and cities, in consideration of the services rendered by practitioners during the prevalence of devastating epidemics.

Sometimes, again, the present is in the form of a wife. Thus, Podilirius, whose praises have been sung by Homer, was rewarded by the King of Caria with the hand of his daughter, whose life he was supposed to have saved by bleeding her in both arms, after a fall from the top of a house. Such a gift might not always be agreeable or convenient to the recipient, but it could hardly be otherwise when it comes in the form of a rich princess, as in the case of Podilirius.

Governments do not always reward their subjects in proportion to the value of their services. Jenner, for his immortal labors in vaccination, by which millions of lives have been preserved, received from the British Parliament the paltry sum of £20,000. Brossard, a French surgeon, in the seventeenth century, was richly rewarded by the French government for the disclosure that agaric would arrest hemorrhage after surgical operations. The remedy was tried, and, of course, found useless, though not until a number of lives had been lost by it. Mrs. Stephens, as late as the last century, obtained a large sum from the British Parliament for making known the supposed virtues of Castile soap and eggshells in dissolving urinary calculi.

The charges for attendance at coroner's inquests are not commensurate with the services exacted upon these occasions. From ten to twenty dollars is the usual fee for making a dissection for the benefit of the public, and even that sum is often grudgingly allowed. In cases of poisoning the remuneration is, of course, more liberal, though seldom adequate. The largest compensation for services of this description ever paid in this, or, perhaps, in any other country, was that recently awarded by the City of New York to Dr. Doremus, Professor of Chemistry in the New York Medical College. The sum allowed to him was $3,000, besides $800 for the outlay of new apparatus. The case was that of Stephens, tried for the murder of his wife by poison. Dr. Doremus was obliged to analyze two entire bodies.

Finally, a good fee is a powerful stimulant, causing the most delightful sensations, and goading a man on to the most vigorous performance of his duties. It increases the pace of the sluggard, and improves the digestion of the dyspeptic. There is not a man in the profession that has not, at times, felt the force of the practice of the celebrated physician of Bath. Finding himself no better for his own prescriptions, he laughingly observed to a friend, "Come, I think I will give myself a fee ; I am sure I shall do better then." Putting his hand into his pocket, he took out a guinea, and gravely passing it to the other, he soon got well. Assuredly, reader, there is great potency in a good fee.

Physicians sometimes place no better estimate upon their services than their patients. A young professional acquaintance recently told us that, not long ago, after having prescribed for a female, she handed him a one dollar counterfeit note, which he did not hesitate to take although he knew at the time it was worthless, believing that it was a fair equivalent for his services. We have not examined our brother's organ of conscientiousness, but suppose it to be very large.—*North Amer. Medico-Chirurgical Review.*

Increase of Muscle during Growth. By J. Budge.—It has long been a matter of some interest to ascertain whether, during growth, and the hypertrophy caused by exercise, the muscular fibres of animal life increase in number or merely in size M. Budge, in an interesting communication to the French Academy, states that the actual number of the fibres increases with every year during the period of growth, so that the increase of muscular tissue does not depend alone upon enlargement of the individual fibres of the muscles. M. Budge has also ascertained that starvation diminishes the number of the fibres, and notably lessens their size.—(*Journal de Physiologie;* from *Comptes Rendus de l' Academie,* October, 1858.)

On Calculous Diseases in Hungary. By *Professor Balassa.*—This article is the substance of a reply made by Professor Balassa, of Pesth, to a circular asking for statistical information, issued by Professor Gross, of Philadelphia, U. S. Owing to the absence of rural hospitals in Hungary, Professor Balassa observes, almost all the cases of stone which occur in Hungary are brought to Pesth for treatment; and in his clinic at the hospital, he has treated, in the twelve years, 1843–55, 135 cases. The ages of these patients were as follows:

From 1 to 7 years	21
" 8 " 15 "	32
" 16 " 25 "	47
" 26 " 50 "	27
" 51 " 60 "	6
" 61 " 70 "	2
	135

The employments and conditions of these patients were as follows: Peasants, 82; artisans, 39; tradespeople, 7; *employees,* 2; land-owners, 2; students, 2; teacher, 1.

Thus calculous affections are met with in the Pesth clinic with by far the greatest frequency in the young, inasmuch as out of a total of 135 cases, 100 of the patients had not reached their twenty-sixth year; and when it is added that in most of the cases the disease

has long existed, its origin must be referred to a still earlier age. Moreover, during the twelve years, there were also forty-nine children treated for stone, in the Pesth Children's Hospital. So, too, the immense proportionate prevalence of the disease in the peasant (60·74 per cent.) and in the artisan (28·889 per cent.) classes is to be remarked. These classes, indeed, almost exclusively furnish the examples of the disease occurring among the young, as the author's private practice has taught him. Dr. Ivanchich, too, in his statistics of 100 cases of stone, comprises 33 natives of Hungary, but only two of these are as young as eighteen. The conclusion is, then, that stone prevails especially among the young of the poorer classes; and this leads us to consider some of the influences that are at work in its production. The nature of the diet and mode of life can alone explain these differences. It is the custom in Hungary to feed children when weaned, or even while suckling, upon the same articles of diet as are employed by adults, and while these in the wealthy classes may be nutritious and digestible, among the poor they consist of unwholesome matters, as fruits, vegetables, pork and bacon. The latter, then, are fed with a diet that is difficult of digestion, and containing by far too large a proportion of the carbonaceous element; and the importance of this statement will be seen when the chemical constitution of the calculi has been considered.

For various reasons, the author has only been able to preserve 83 calculi in his cabinet, but all these have been carefully examined, and he furnishes the details of the results: 63 of the calculi were of homogeneous composition, and in 20 the nuclei and external portions were of different composition The general result is, that while uric acid was the most frequent constituent, it was not the most frequent chief constituent, for while it was found more or less in 72 calculi, it constituted the chief portion of these only in 23. The oxalate of lime was the chief constituent; for it formed the chief mass of 20 calculi of homogeneous composition, and formed the nuclei in 12 out of the 20 stones of non-homogeneous composition. It is evident, then, that the formation of stone in Hungary is much due to the richness of the urine in oxalates, *i. e.* in the carbonaceous combinations furnished by the defective aliment employed. Of the 20 stones having nuclei of different composition to the surrounding parts, in 12 these consisted of oxalates, and in 8 of urates. It is owing to the prevalence of these in the urine that the first impulse to the formation of calculi is given, while their enlargement much depends upon the presence of phosphates. These were present either as a chief or partial constituent in 45 calculi. These considerations lead to the conclusion that the most effectual means of preventing the formation or recurrence of calculi would be to act upon the oxalic or uric acid formations of the urine.

Of the 135 cases, 13, on account of disease of the urinary organs or the condition of the entire economy, were deemed unsuitable for operation. Some of the 122 operations were performed under very unfavorable circumtances, in consequence of chronic diseases of the urinary organs.

Of the 122 cases operated upon, 92 were submitted to lithotomy, and 30 to lithotrity. Of the former, 11 patients, (11·95 per cent.,) and of the latter, 5 (11·66 per cent,) died. Among the 11 fatal lithotomy cases, there were 5 individuals who suffered from severe chronic disease of the kidney, and one who died of typhus during an epidemic. There were, therefore, only 5 cases in which death took place in from the second to the fifth day, from inflammation of the bladder or peritoneum, consequent upon the operation. This reduces the strict mortality from the operation to 5·43 per cent. Among the 5 fatal lithotrity cases, in 1 death was due to phthisis, in 2 to old suppurative nephritis, and in 1 to recent nephritis, this last and one other death being alone directly referable to the operation, *i. e.*, 6·66 per cent. Rectal fistula, and urinary infiltration were never met with in any of the lithotomy cases. The difficulty in extracting the stone was considerable in many cases on account of its size, and in several of these inflammation of the bladder and peritoneum was set up, this proving fatal in 5 instances. Irritation and inflammation of the bladder frequently also, followed lithotrity, leading to considerable delay in the repetition of the operation.

With the exception of 7 cases, the stone was always removed entire. The largest calculus measured two inches five lines in diameter, in 5 calculi the diameter was above two inches, and in 24, between one and one and a half inch. The heaviest, removed from a boy ten years old, weighed one ounce and a half and ten grains, and the lightest seventeen grains. In 8 patients there were two stones, and in 1 three. In 2 children union by the first intention took place, and they left between the eighth and tenth day. The other patients were discharged between the twenty-first and sixtieth days. Relapse occurred in 2 instances after lithotrity, and in 1 after lithotomy.

Of the whole 135 cases, only 1 occurred in a female, upon whom lithotrity was performed.

As to the mode of performing lithotomy, Professor Balassa makes an aperature in the bladder with a convex scalpel sufficiently large to admit the index finger of the left hand, and then enlarges it by means of a straight probe-pointed bistoury or Heister's knife. He lays great stress upon the wound being made sufficiently large, and in cases of voluminous calculi, frequently makes a bilateral incision. After bleeding has been arrested by the injection of iced water, (performed while the fingers maintain the wound of the bladder open,) some small strips of oiled linen are carried along the index finger to the wound in the bladder, (especially when extraction has been difficult,) in order to prevent the urine penetrating the swolen edges of the track of the incision. They are removed after two or three days, and the author attributes the non-occurrence of infiltration principally to their employment.—*Wien Medizin. Wochenschr.*, 1858, Nos. 25 and 26.—*British and Foreign Medico-Chirurgical Review*, July, 1859.

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

The Diagnosis Pathology and Treatment of Diseases of the Chest. By W. W. GERHARD, M. D., one of the Physicians to the Pennsylvania Hospital—Fellow of the College of Physicians of Philadelphia, member of the American Philosophical Society, etc., etc. Fourth Edition, revised and enlarged. Philadelphia: J. B. Lipincott & Co., 1860.

This work, which has been before the profession for some time, the first edition having made its appearance in 1846, is very well adapted to the wants of the practitioner. The work on *Mediate Auscultation*, by Laennec, gave precision to the history of thoracic diseases. Andral called attention perhaps first to *Bronchial* respiration, and pointed out its value. Louis' merit in his work on Phthisis, is, that he developed more completely the Pathological Anatomy and Symptoms. Of late we have the treatises of Barth and Roger, Walsh, and Flint, the last of which is a work of more than common value. Dr. Gerhard aims at an exposition of every thing pertaining to diseases of the Chest. Here we have the Pathological Anatomy, Physical Signs, Symptoms, Diagnosis, Prognosis and Treatment, all in a single volume of four hundred and forty-eight pages. This then we look upon as a very good text-book for the Student, while the practitioner will find, on examination of the chapters that ought to show the progress of late years, that the Author in the edition before us is fully up to the times.

It is but a few years since *Consumption* was regarded as an *opprobrium medicorum.* The different varieties of the disease are now better understood, together with the relative amenability of its different forms to treatment. Since observation has proven that *cavities* in the lungs, once in a while, are healed up, thus becoming in most cases obliterated, the case has to be a very bad one that presents no ground at all for hope.

So far as pathology is concerned, without going into details, it may be safely asserted, that it consists in a degraded state of all the

more important functions of the organism ; a state of the movements that are very much below par. In a case of phthisis it is not uncommon to have intercurrent inflammation and other evidences of local sthenia, still the ruling tendency is downwards, and the actions those of disintegration.

Such facts have led to an almost total change of treatment. Digitalis, mercury, tartar emetic, lobelia inflata, etc., have been mostly laid aside, and general blood-letting entirely so. It is true that authors continue to recommend in intercurrent pneumonia and pleuritis, local blood-letting, blistering, and the general use of some of the articles above noticed, and this is true of the work before us. Sagacious practitioners, however, and those who know the most of such treatment, are in favor of abandoning it, for the stimulating, strengthening plan—the use of alcoholic drinks, and a rich nourishing diet. We have, comparatively speaking, just entered upon this experiment, and we have no doubt of its having been made too general, and raised expectations that can never be realized. It is, nevertheless, not inconsistent with pathology ; and so far as its success is concerned, there is much valuable testimony.

In giving the treatment for *Pulmonary Hemorrhage,* when connected tubercles, the Author says : "The patient should scarcely ever be bled from the arm, unless there is extreme excitement of the pulse with a full and developed force."

Is this excitement of the pulse, etc., good ground for venesection ? We think not. Better use sedative drugs, such as veratrum, tartar emetic. We have long hoped to see this suggestion of blood-letting abolished. It is unwise.

The Action of Medicines on the System. "*Or on the Mode in which Therapeutic Agents, introduced into the Stomach, produce their peculiar effects on the Animal Economy.*" By FRED. WM. HEADLAND, M.D., B.A., F.L.S. Third edition, revised and enlarged. Philadelphia: Lindsay & Blakiston, 1859.

What little is known of the *Action* of medicines is pretty well set forth in this work. It met, on its first appearance, with special favor, because of the clear and comprehensive terms in which the

doctrines are couched. In the edition before us, some matters are noticed which were not included in former ones, and certain topics are more fully discussed than before.

The general modes of action of therapeutic agents introduced into the stomach are treated of in *Ten* Propositions. Then we have a chapter on the Action of some of the more important medicines in particular. As the work is pretty generally in the hands of the profession, our intention at present is simply to announce the appearance of the *third* edition.

The Obstetric Catechism. Containing Two Thousand Three Hundred and Forty-seven Questions and Answers on Obstetrics Proper. By Jos. Warrington, M.D. One Hundred and Fifty Illustrations. Philadelphia: J. B. Lippincott & Co., 1860.

This work is designed as a sort of *vade mecum* or "*test*" book for the student. As far as we have examined it, the questions appear pertinent, and the answers generally correct. The Author deserves the thanks of the obstetrical student for thus bringing within a small compass the whole skeleton of obstetrical science.

An Introduction to Practical Pharmacy, designed as a Text-Book for the Student; and as a Guide for the Physician and Pharmaceutist, with many Formulas and Prescriptions. By Edward Parrish, Graduate in Pharmacy, Member of the Philadelphia College of Pharmacy and of the American Pharmaceutical Association, etc., etc. Second Edition greatly enlarged and improved; with two hundred and forty-six Illustrations. Philadelphia: Blanchard & Lea, 1859.

The success of the *first* edition of this work has been such as to stimulate the Author to make it worthy of still more general acceptance. The numerous chemical, therapeutical, and physiological discoveries have not only added to the resources of the physician, but increased very much the domain of pharmacy.

The *syllabi*, in the present edition, enhance very much its value. By this form the author has been enabled to arrange an immense number of facts in a small space, and displaying them effectually in their relation to each other.

PART FOURTH.

EDITORIAL AND MISCELLANEOUS.

Medical Students in Motion.

We see by the secular papers of Philadelphia, that quite a dissatisfaction has been manifested by the Southern students in attendance during the present season at the two leading colleges, the Jefferson Medical and the University. The trouble seems to have grown out of the *Slavery* question. The number of students that left the colleges have been estimated at two hundred from the Jefferson, and one hundred from the University. In New York, the medical students from the South, have also had a meeting to take into consideration the propriety of leaving, but they, it seems, decided to stay until the end of the session.

The students from the Southern States, or rather from the slave-holding States, make a very considerable proportion of the classes of the Philadelphia schools. Of the present class of the Jefferson, some seventy-three per cent. is said to be from the slave-holding States. We have not learned the proportion in the other schools. When, however, it is recollected that over one thousand Southern students have annually migrated to the North in quest of medical information, the per cent. in all the principal schools must be large.

This move, taken in connection with other things, seems to shadow forth, in no unmistakable outlines, the inauguration of measures that in the future must seriously affect our Philadelphia and New York schools of medicine. Withdraw one thousand students from their classes and they sink at once to the level, indeed below it, of many of the schools supported by local patronage.

Although not by any means ignorant of the fact that the public mind of the country has been waxing warm for a few years past over the slavery question, we were not prepared to see so soon that medical science was about to be implicated in the controversy—to see the benches of the oldest colleges of the country in part vacated in the middle of their sessions, because of differences of opinion on African Slavery. "*Tempora mutantur et nos mutamur in illis.*"

Political revolutions, as far as we are acquainted with them, have

not been in any way benefical to the progress of science. Once inaugurated, the worst passions are apt to get the ascendency, and under their sway, not only is there destruction of life and property, but all the fruits of *Art* and *Science,* treasures that it had taken centuries to collect, and that marked the progress of civilization, are often destroyed in an hour. At the attempt of the Saracen General, Amrou, to take Alexandria, the Library which had been founded by the Ptolemies, and which contained the most valuable literary treasures of antiquity—contained, indeed, a record of pretty much all that the Greeks and Egyptians had ever known—was consigned in the passion of the moment to the flames. It was at this Alexandrian School that the study of Anatomy was first legalized. Here figured Herophilus and Erasistratus, Anatomists; Philolethes, who wrote the first work on diseases of the eye; Zopyrus and Cratevas, who improved the art of Pharmacy and invented Antidotes. It was in Alexandria also that Soranus and Galen were educated.

But very much nearer to our own times we have an instance that ought not to be forgotten. Lavoisier, the world renowned chemist, was condemned to death by the *Revolutionary Tribunal* of Paris on a very frivolous pretext, that of adulterating the tobacco with ingredients obnoxious to health; and on this charge was beheaded by the guillotine, May 8th, 1794. When he found his fate inevitable, he petitioned the Tribunal for a little time, in order to complete some interesting chemical experiments he had on hand, but this favor was denied him.

As a *Medical* nation we have scarcely doffed the swadlings of infancy. Our institutions of learning are all, as yet, in the formative state. We are indeed as sappy as we well can be. We have no authors on any department of science. The unthankful business of collecting together the labors of others, is the most that those of us who have aspired to authorship have shown ourselves capable of. As yet we have reared no specimen of the *genus homo,* with capacity enough to invent a maxim or a saying worth recollecting, or that has lived over six months. Our ideas are not only all borrowed, but our words too. If we wish to say anything forcibly or elegantly we must quote Solomon, Shakspeare, or the Classics.

But notwithstanding all this, we are growing, and if not disturbed would soon amount to something. We have no opinion, therefore, of being just now subjected to the whims and caprices of Cæsar. He is a little too uncertain to risk much on. Once let loose he is ungov-

ernable, and is as likely to be down on saint as sinner. It is true we have no Alexandrian libraries for him to burn, but there is any quantity of necks that he might amuse himself in stretching.

A Case of Successful Treatment of Popliteal Aneurism by Compression.

In glancing at the proceedings of the Ohio State Medical Society, for 1857, we are reminded of this case, treated and reported by Drs. G. F. Mitchel, and J. W. Bond of Mansfield, O. The leading facts are as follows:

The patient, J. P., aged 28, had an aneurismal tumor behind the knee joint, about four inches in diameter. It commenced while the patient was making violent muscular exertion, fifteen months previously. The treatment was commenced on the 25th of July, 1854, the foot and leg being bandaged as high as the tumor.

One clamp tourniquet, and one ring tourniquet, were then applied over the femoral; these were alternately relaxed and tightened, and their position shifted along the course of the artery. In a short time, however, the ring tourniquet was removed, and another clamp tourniquet applied in its stead. As the patient was intelligent, he was readily instructed in the use of the instruments, and, being anxious to carry out the plan of treatment, he was left to regulate the amount of pressure, in a great degree, for himself.

For the first ten days, compression was applied for from 12 to 14 hours in the twenty-four. Some pain was experienced during this time, but not enough to disturb the patient. His sleep was sound and refreshing, during which the tourniquets were removed. The tumor had now become decidedly firmer, less in size, and the sack could no longer be emptied; œdema was also fast disappearing. For the next three weeks pressure was applied from 16 to 18 hours per day, the sack becoming gradually firmer, and pulsation less distinct. Two small arteries, running longitudinally over the back of the tumor could now be easily detected. For the next six days the pressure was maintained for about 20 hours in the twenty-four, pulsation becoming still more faint, and for the last five days it was applied continually. At this time pulsation in the sack ceased suddenly, diminution in size progressing. Compression was now continued for a few days longer, when exercise was allowed the patient,

the collateral vessels becoming at the same time enlarged. Six weeks precisely were occupied from the time compression was begun till all pulsation ceased.

At no time was the circulation through the artery entirely checked. The pain was never severe ; the pressure along the course of the vessel being so alternated as to secure to the patient the greatest amount of ease possible. No redness or excoriation of skin at any time existed.

Throughout the whole treatment the patient was comfortable, retaining his usual vivacity.

Nearly two years have now elapsed since his dismissal. The diseased leg is apparently as strong as the other. His health is good, so that we may with confidence pronounce the cure complete.

H.

Kansas City Medical and Surgical Review.—We are in the receipt of the prospectus of a new Medical Journal, the publication of which, under the above name, it is proposed to commence on the first of January, 1860, at Kansas City, Mo. The proprietors of the enterprise are G. M. D. Maughs, M. D., and T. S. Case, M. D.

We have intimate personal knowledge of the latter gentleman, and are gratified to state, that his medical and general scholarship are such as to fit him, in an eminent degree, for such an undertaking. We wish the young enterprise every possible success. H.

Ovariotomy in Ohio.—In the last number of the Journal we omitted, from inadvertency, to call the attention of the profession to our list, therein contained, of Ovariotomy cases in Ohio. We are continued, by the State Society, as chairman of a committee on that subject It is our wish to be able, at the next meeting of the Society, to present in brief any such cases as may transpire during the year, and especially any such cases as may have occurred heretofore, and of which, hitherto, we have not learned. We have already learned of two old cases, which we failed to get, one in Wayne and one in Tuscarawas county ; and of two new ones, one in Wayne and one in Brown county. For the clue to any such cases as may

have occurred, and are not contained in the above or our late report, we will be under special obligations to any physician who will forward it. We are not disposed, in this matter, to be satisfied with anything short of the *whole truth.* H.

SUMMER COURSE OF LECTURES AT STARLING MEDICAL COLLEGE.—We wish to call the attention of Physicians and Students to the advertisement, contained in the present number of the *Journal,* of the Summer Course at Starling Medical College. As this course is attended with no additional expense to such as attend a subsequent winter course, it is expected that a liberal number of Students will avail themselves of its advantages. H.

MORTUARY STATISTICS OF THE OHIO PENITENTIARY.—The subjoined table gives the number of deaths, and the number in prison for each year since 1834 :

YEAR.	No. Died.	Whole No. in Prison.
1834	..	187
1835	6	276
1836	11	314
1837	9	392
1838	26	443
1839	16	489
1840	4	488
1841	13	480
1842	8	461
1843	15	460
1844	12	464
1845	16	482
1846	7	498
1847	7	445
1848	8	425
1849	121	336
1850	21	424
1851	9	469
1852	13	508

1853	17	531
1854	44	587
1855	8	606
1856	10	598
1857	9	608
1858	11	693
1859	6	853

For the entire 26 years of the existence of the present prison, the yearly average number of prisoners is 439. The average of deaths for each year is 17, or nearly 4 per cent; entitling each prisoner, of average age, to the expectation of 26 years of additional life.

An interesting aspect of these statistics is shown by dividing the period of existence of the institution into two periods; one including the first 21, and the other the last 5 years.

In the first of these periods, the average number of inmates is 431; the annual average of deaths, during the same time, is 19, or 4.41 per cent, entitling each prisoner, of average age, to the expectation of $22\frac{2}{3}$ years of additional life.

During the last 5 years, the yearly average number of prisoners is 671; the average yearly deaths $8\frac{4}{5}$ or 1.15 per cent.; entitling each prisoner, of average age, to the expectation of 87 years of additional life.

The average ages of the 853 prisoners in the institution, on the first day of November, 1859, is $29\frac{1}{2}$ years, and this is assumed as the average age of all the inmates of the institution; this added to 87 years, the expectation of each prisoner of average age, gives, on the basis of the statistics of the last five years, *one hundred and sixteen and a half years*, as the average period of human life in the Ohio Penitentiary.

This latter aspect of these statistics will appear the more striking when it is borne in mind that this period of 5 years includes two extensive epidemics; one of malarious disease, and the other one of typhoid fever, in which there were more than 100 cases. H.

Points made in a Lecture on Injuries of the Heart. By Prof. Jno. Dawson.

Gentlemen:—I will occupy you for a moment on the Regional Anatomy of the Heart, for the purpose of making you acquainted

with the part of the organ that in a given case may be injured by external violence.

The chest is arranged for two great purposes. It contains the lungs, organs designed for the ventilation of the blood, and the great central organ of circulation, the Heart. Perhaps the latter is the prime design of the cavity.

Situated within the chest, and between the lungs of each side, the Heart and its different parts are intimately related in position to the sternum in front, the vertebræ posteriorly, and the ribs laterally; and it is by observing these normal relations that we are enabled to comprehend with any degree of accuracy the character and extent of the injuries sustained by the organ.

When you examine the cadaver with the sternum removed, and the lungs drawn backward by hooks, you will see that the heart is situated mostly on the left side of the mesial line. Its base is upwards and to the right, its apex downwards and to the left. Or to be more specific, about two-thirds of the organ is on the left of the mesial line, the other third on its right. The highest point of the base of the heart will be found on a line corresponding to the cartilage of the third rib on the left side, while the lowest point, the apex will be found in the intercostal space between the fifth and sixth ribs on the left side, and just outside of the junction of the rib with its cartilage. The greatest transverse diameter is between the third and fourth ribs, extending from a point just within the nipple of the left side to half an inch beyond the sternum on the right side.

The following are the dimensions of the heart in the male:

Vertical diameter,	4	inches	0	Lines.
Tranverse "	4	"	4	"
Right oblique, "	4	"	10	"
Left oblique, "	3	"	10	"

The dimensions of the female heart are less.

Thus situated and with such dimensions, we may next inquire into the relation of the *cavities* and the *valves* to the parietes of the chest. Both sets of semi-lunar valves, valves situated between the ventricles and the arteries, are beneath the sternum and corresponding very nearly to a line drawn from tho cartilage of the third rib on one side to the same point on the other side, the valves of the pulmonary artery being rather anterior to those of the aorta. The auriculo-ventricular valves are also mostly under the sternum. The

tricuspid will be found under a line drawn obliquely across the sternum, extending from the junction of the cartilage with the third rib on the left side to the cartilage of the fifth rib on the right side. The *mitral* valve, between the left ventricle and left auricle, is rather posterior to the tricuspid and corresponding with the space between the third and fourth ribs on the left side.

The pulmonary artery is to the left of the medium line, and extends from the third to the second rib. The aorta at its commencement, is beneath the pulmonary artery, it however, proceeds over to the right side of the spine and to the right side of the pulmonary artery. It then rises nearly to a level of with top of the sternum and descends on the left of the spine. The *right* ventricle is rather anterior, one third of it beneath the sternum, the rest of it to the left of that bone About one-fourth of the *left* ventricle presents anteriorly. The *septum* between the ventricles coincides with the osseous extremities of the third, fourth, and fifth ribs. The *right* auricle is mostly beneath the sternum ; it, when full of blood, extends laterally an inch or more to the right of that bone ; its greatest breadth is between the cartilages of the third and fourth ribs. The *left* auricle is in part visible when the lungs are separated between the second and third left ribs.

Sounds of the Heart—Where Heard.—The heart has two sounds due to the movements of different parts of the organ. We are in the habit of attributing the *first* sound, which is synchronous with the contraction of the ventricles, the rush of blood into the arteries, the tilting up of the apex against the left side of the chest, and the action of the auriculo-ventricular valves, to all of these things or circumstances combined. A late authority, (Dalton) however, is content to invoke alone the action of the auriculo-ventricular valves. The *second* sound, by general consent, is regarded as being due to the valves situate between the ventricles and the arteries—the semilunar valves.

As a consequence of these views, the first sound would be most audible—heard, with the greatest ease, at points coinciding with the position of the auriculo-ventricular valves, and the place where the apex-beat is felt. The second, just above the base of the heart, in the intercostal space between the second and third ribs on the right side.

Such being the points where the normal sounds are heard, they are the points also where, when present, the abnormal ones will be found.

The injuries to which the heart is exposed from perforating instruments, gun-shot wounds, etc., may be located by bearing in mind the relations we have just passed in review.

A dagger, for example, introduced close to the sternum in the intercostal space between the fifth and sixth ribs, would open the right ventricle, and perhaps both ventricles. Introduced between the fourth and fifth, or third and fourth ribs, near their open extremities, on the left side, the instrument would be likely to pass into the ventricular septum, not opening any cavity.

Introduced half an inch to the right of the sternum, perpendicularly to the plane of the chest, and in the intercostal space of the third and fourth ribs, it would pass into the right auricle.

Introduced between the cartilages of the second and third ribs, close to sternum, perpendicularly to plane of chest, on the left side, it would open the left auricle.

Introduced through the middle of the sternum, perpendicularly to its plane, and opposite to the cartilage of third rib, it would pass into the aortic valves.

Introduced between the second and third cartilages, half an inch to the left of the sternum, direction same as before, it would pass into the pulmonary valves.

The aorta would be opened by passing the instrument behind the sternum, from above downwards, or through the sternum opposite the first rib and perpendicularly to its plane. The pulmonary artery would be opened by introducing the instrument half an inch on the left of the sternum, and in the intercostal space between the second and third ribs.

These suggestions on the regional anatomy of the chest, enables us to understand how it is that an injury of the heart may, in one case, prove immediately fatal; in another, not. Opening of any one of the cavities, or of the aorta, or pulmonary artery, would be followed by immediate death. But an instrument, or a ball, might pass, or lodge, in the walls of the ventricles, or in the *septum ventriculorum,* and not be followed by fatal results.

Notes on some of the Chemical Reactions of Morphia. By T. G. Wormley, M. D.

Pure morphia was dissolved in water by the aid of just sufficient sulphuric acid, and a small drop of a saturated solution of the reagent was applied to a grain of the morphia solution, placed on a glass slide. The amount of morphia operated upon will frequently be stated in the form of a fraction, it being understood to imply the fractional part of a grain of morphia, in one grain of water.

1. Nitric Acid.

1. $\frac{1}{100}$th, grain of morphia in one grain of water, when acted upon by *one drop* of concentrated nitric acid, almost immediately assumes a lemon color, which in a few seconds changes to orange, and finally into a fine red-orange, which very slowly becomes yellow.

2. $\frac{1}{250}$th, the mixture is very soon of a lemon color, changing to a good red orange.

3. $\frac{1}{500}$th, soon lemon color, which in a few minutes changes to light and then to deep orange.

4. $\frac{1}{1000}$th, very slowly assumes a lemon color, after some minutes a very light orange.

5. $\frac{1}{2500}$th, only a perceptible lemon color after some minutes, very faint and only to be seen upon a white ground.

The test is much more delicate and satisfactory when the morphia solution is evaporated to dryness and then a very small quantity of nitric acid applied to the residue.

1. $\frac{1}{100}$th, when touched by a small drop of nitric acid, the deposit immediately becomes fine red-orange, which slowly dissolves, giving a solution of the same color.

2. $\frac{1}{1000}$th, the deposit is at first yellow, soon changing to a bright brown-orange, giving a solution of fine orange.

3. $\frac{1}{5000}$th, the acid gives a very evident brown color to the residue, which when dissolved gives a solution of a very faint color.

4. $\frac{1}{10000}$th, by using the smallest possible quantity of acid, after a little time the deposit becomes a very distinct faint brown color.

5. $\frac{1}{15000}$th, the action of the acid is perceptible, but not satisfactory.

2. Sesquichloride of Iron.

1. $\frac{1}{100}$th, grain of morphia, with a neutral solution of the sesquichloride of iron gives an immediate faint ink blue cloudiness, which soon forms a good flocculent precipitate.

2. $\frac{1}{250}$th, after a little time the reaction is perceptible, and in a few minutes quite obvious.

3. $\frac{1}{500}$th, after a few minutes the reaction is faint but evident.

4. $\frac{1}{1000}$th, no indication after several minutes.

3. Iodic Acid.

1. $\frac{1}{100}$th, if a drop of the morphia solution be added to a drop of a solution of iodic acid to which there has been added a small drop of starch solution, there will be immediately produced a blue precipitate, with a brown solution.

2. $\frac{1}{500}$th, a quite perceptible blue precipitate, with brown solution.

3. $\frac{1}{1000}$th, there is no precipitate, but the mixture assumes a slight brown tint.

4. Potash.

1. $\frac{1}{100}$th, if touched by a small drop of potash solution, it will give an almost immediate white crystalline precipitate, which is much increased by rubbing the mixture with a glass rod. The precipitate is very soluble in excess of potash.

2. $\frac{1}{500}$th, by rubbing, in a very little time there is produced a very good precipitate.

3 $\frac{1}{1000}$th, in a few minutes the results are satisfactory, especially with the microscope ; the precipitate is in the form of granules.

In applying this test it is important that too much of the reagent should not be used, otherwise no precipitate will be produced.

The carbonate of potash gives the same indications as those above.

5. Ammonia.

1. $\frac{1}{100}$th, if the morphia solution be touched by a very small drop of aqua ammonia, or still better, by suspending a drop of the ammonia over the morphia solution for a few moments, the latter solution does not become cloudy, but in a few seconds small crystals are produced which soon become large and abundant. If, after the application of the reagent, the mixture be rubbed, it will give almost immediately a fine crystalline deposit.

2. $\frac{1}{500}$th, in a few seconds crystals appear, and soon are rather abundant. By rubbing they are much increased.

3. $\frac{1}{1000}$th, by rubbing one or two minutes, there is a very good precipitate, consisting of small prisms and granules.

Carbonate of ammonia behaves the same as ammonia.

The above reactions of potash and ammonia would seem to indicate that morphia was not entirely soluble in 1000 parts of water.

6. Iodide of Potassium.

1. $\frac{1}{100}$th, by rubbing, immediately rings of granules and prismatic crystals, which in a little time become almost a mass.

2. $\frac{1}{500}$th, very soon granules and crystals.

3. $\frac{1}{1000}$th, after a little time quite satisfactory.

With the acetate of morphia the reagent acts more slowly, and the results are not as satisfactory.

7. Chromate of Potash.

1. $\frac{1}{100}$th, without rubbing, the reagent gives no precipitate in several minutes, but if stirred, immediately rings and fine crystalline prisms, which soon become abundant. The acetate of morphia, when treated as above, gives no indication for some minutes, then crystals begin to form along the edge of the drops, and after a little time the results are satisfactory, but not nearly so good as in the sulphate.

2. $\frac{1}{500}$th, after rubbing about one minute, small granules appear; after several minutes no distinct crystals.

3. $\frac{1}{1000}$th, by rubbing several minutes, granules, not abundant.

8. Bichromate of Potash.

1. $\frac{1}{100}$th, very soon a yellow amorphous precipitate begins to form, which in a few minutes is quite good, but remains amorphous. The precipitate slowly dissolves in several drops of acetic acid.

2. $\frac{1}{250}$th, the precipitate appears after several minutes.

9. Tannic Acid.

1. $\frac{1}{100}$th, immediately a bluish white cloudiness, which soon forms good dirty white flakes. The precipitate readily dissolves in a few drops of acetic acid and in solution of potash.

2. $\frac{1}{500}$th, soon quite a good bluish white precipitate.

3. $\frac{1}{1000}$th, after a little time the precipitate is quite perceptible.

10. Carbazotic Acid.

1. $\frac{1}{100}$th, an immediate copious bright yellow amorphous precipitate. slowly soluble in a few drops of acetic acid.

2. $\frac{1}{500}$th, very soon quite obvious.

3. $\frac{1}{1000}$th, no indication.

11. Chlorine.

1. $\frac{1}{100}$th, if 10 grains of the morphia solution be taken and a stream of chlorine be passed into it, the mixture becomes a deep yellow, which upon the addition of ammonia is changed to deep brown, not affected by excess of ammonia or acetic acid.

2. $\frac{1}{1000}$th, 10 grains of, with chlorine gives a yellow tinge, with ammonia, brown.

3. $\frac{1}{5000}$th, 10 grains of, no indication with either the chlorine or ammonia.

12. Bichloride of Platinum.

1. $\frac{1}{100}$th, an immediate rather copious yellow amorphous precipitate.

2. $\frac{1}{250}$th, no indication.

13. Bromine in Bromohydric Acid.

1. $\frac{1}{100}$th, an immediate copious yellow amorphous precipitate, which soon dissolves if there is not excess of reagent.

2. $\frac{1}{1000}$th, an immediate green yellow precipitate.

3. $\frac{1}{2500}$th, a quite distinct but not copious precipitate.

4. $\frac{1}{5000}$th, no indication.

14. Iodine in Iodide of Potassium.

1. $\frac{1}{100}$th, a copious red brown amorphous precipitate, which slowly dissolves in a few drops of acetic acid, but readily without the production of a white precipitate, in a solution of potash, this reaction distinguishes morphia from strychnia. If a very small quantity of reagent be applied there will be no precipitate, or it will soon dissolve.

2. $\frac{1}{1000}$th, a very fine red-brown precipitate.

3. $\frac{1}{10000}$th, an immediate cloudiness, which soon becomes a fine brown yellow precipitate.

4. $\frac{1}{20000}$th, a green yellow precipitate.

5. $\frac{1}{50000}$th, after a little time the precipitate is very perceptible.

6. $\frac{1}{80000}$th, after a time the precipitate is perceptible. The best indications are obtained from dilute solutions, by placing a drop of the reagent by the side of the morphia solution, and allowing them to flow together.

15. Terchloride of Gold.

1. $\frac{1}{100}$th, immediate copious yellow amorphous precipitate, which immediately begins to darken; the addition of a drop of potash

gives a dark purple precipitate with a deep purple solution. A full drop of reagent should be used, otherwise the precipitate will dissolve.

2. $\frac{1}{1000}$th, in a few seconds, a copious greenish yellow precipitate, which soon begins to darken; upon adding a drop of potash the precipitate nearly all dissolves, and the solution slowly darkens, as does also the precipitate.

3. $\frac{1}{2500}$th, very soon a fine yellowish precipitate, which with a drop of potash entirely dissolves, giving a slight yellow solution.

4. $\frac{1}{5000}$th, much the same as 3.

5. $\frac{1}{10000}$th, in a few seconds the precipitate is very good.

6. $\frac{1}{20000}$th, in a very little time quite good.

7. $\frac{1}{40000}$th, in a few minutes quite satisfactory.

If a very small quantity of the reagent be applied to a strong solution of morphia, there will be no precipitate, or, if produced, it will dissolve upon agitation. This I presume, explains the statement of Taylor,* that morphia gives no precipitate with chloride of gold; and, also, that of Pereira,† who states that the precipitate produced, "on shaking is taken up."

If the precipitate produced from about 20 drops of a $\frac{1}{1000}$th, or stronger solution, be heated, the peecipitate does not dissolve, but becomes brown or dark from a reduction of the gold salt; if a $\frac{1}{2500}$th solution be used, the precipitate dissolves upon heating, but immediately upon cooling, the mixture darkens from the presence of small flakes, which after a little time adhere to the sides of the tube; in a $\frac{1}{5000}$th solution, the precipitate readily dissolves upon the application of heat, giving a yellow solution, which undergoes but little change after standing several hours.

With all the above reagents the acetate of morphia gives the same results, except when otherwise stated.

COLUMBUS, Ohio, Dec. 24th, 1859.

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* On Poisons, Amer. Edit. p. 624, 1848.

† Mat. Med., Amer. Edit. vol ii p. 1061, 1854.

CITRIC ACID IN RHEUMATISM.—Dr. Hartieng recommends citric acid, instead of lemon juice, for the cure of rheumatism. He gives 20 grammes (about ℥v.) in sweetened water, in the course of from 15 to 36 hours, the affected part being wrapped in wadding, and the patient being allowed to drink fresh water at discretion. A complete cure is obtained in from ten to fifteen days.

SPINA BIFIDA—TETANUS TREATED WITH WOORARA.—The Paris correspondent of the *L don Med. Times and Gaz.*, in a recent letter (October 10), writes as follows:—

"The last meeting of the Academie de Chirurgie was one of unusual interest, the sitting having been wholly occupied with the discussion of a case of spina bifida, and a case of traumatic tetanus which was said to have been successfully treated with woorara. A child, six weeks old, affected with spina bifida, was, at the instance of M. Huguier, presented to the meeting, in order that he might have the benefit of the opinion of his colleagues as to the course of treatment he ought to pursue. The tumor was situated at the upper part of the sacrum, and its walls, which were firm and solid, exhibited no traces of inflammation; it was compressible, and part of the fluid contained in it disappeared on pressure, and its expansion and contraction were synchronous with the acts of inspiration and expiration. The health of the infant was good, and there was no paralysis of the bladder, rectum, or lower extremities. Without a single exception, all the members of the society were opposed to an operation, and those who had the largest amount of experience in similar cases, were the most energetic in protesting against such a measure. M. Guersant, of the Hôpital des Enfants Malades, stated, in the course of his remarks, that he had punctured fifteen or eighteen cases of spina bifida, and in each case he had had reason to regret having done so. M. Velpeau, who had operated by puncture in four cases, had been successful in only one, and that after four successive operations followed by an equal number of iodine injections; in the case before the meeting, he advised M. Huguier not to have recourse to any surgical operation, but to treat the tumor by compression and the use of astringent lotions, which he believed would in the end prove successful.

"The case of traumatic tetanus was reported by M. Chassaignac having occurred in his private practice. Three circumstances invested it with a more than common interest; first, its having had a favorable termination; secondly, its having been treated entirely by means of woorara; and, thirdly the somewhat unusual, and, if we are to credit the experiments of physiologists, the unscientific manner in which this powerful agent was employed. After the case had been related to the society, M. Chassaignac was subjected to a regular battery of questions, the answers to which materially tend to

shake the confidence of the members, as to the genuine character of the tetanus ; and it was also a question with them whether the woorara had anything to do with the cure. It was the opinion of M. Larrey, and some others, that, although presenting certain of the characteristics of tetanus, such as trismus and emprosthotonos, it was, properly speaking, one of a *local* rather than of a general kind, and consequently a form in which a spontaneous cure is often observed to take place. Such, it has been ascertained, was also the opinion of one of the surgeons who had seen the case with M. Chassaignac, and who had been heard to style it 'Tetanos chronique avec intermittances.' Touching the manner in which the woorara had been employed, M. Chassaignac was rather roughly handled, and was taxed either with ignorance, or want of memory as to the inert character of woorara when administered by the mouth. That he believed in its influence on the system when exhibited internally is evident from the fact that he prescribed a potion composed of ten centigrammes of the drug dissolved in 120 grammes of fluid, a teaspoonful of which he administered every two hours, and which, towards the termination of the treatment, had been increased to double its original strength. But if he displayed a want of knowledge of its effects when administered internally, he also displayed great clumsiness in his manner of applying it locally, which was as follows: Twenty centigrammes of the woorara, dissolved in 120 grammes of some liquid, were used as a lotion, and applied to the wound by means of pledgets of lint, which were renewed every two hours. Now, employed in such an irregular manner, it is impossible, as M. Legouest very justly remarked, to know what quantity of the woorara had been absorbed by the system, the lint having in all probability taken up as much, if not more, than the wound itself had done ; and thus we are left in doubt whether the woorara had anything to do with the cure at all. Besides, the woorara employed had not been tested on animals, either before or after its use in this case, and thus there was no proof of its having been pure. Altogether, the discussion on this case did not redound much to the credit or praise of its reporter, and the profession is no wiser as to the influence of woorara in this formidable malady than it was before the case was reported."

Statistics of Suicide.—Mr. Buckel has asserted, in his able and interesting recent work on Civilization, that the number of suicides is a "constant quantity"—in other words, that suicides, like other so-called crimes, occur very regularly. In the five years, 1852–56, it is shown by the Registrar-General of England, that 5,415 persons put a period to their earthly career by self-destruction, viz: 3,886 males and 1,529 females. The annual average of male suicides is 777·2, and that of females 395·8. The general average shows that upwards of 1,000 persons (1,033·0) put an end to their sufferings by committing suicide every year of grace. The lowest number of suicides was 1,031, (in 1853,) and the highest 1,182, (in 1856.) Poisoning being the easiest, is a common, but by no means a general means of self-destruction. The favorite poisons are arsenic, opium, laudanum, prussic acid, and essential oil of bitter almonds. It is a remarkable fact that female suicides manifest a strange predilection for the very painful irritant poison, oxalic acid. As many as 34 were so foolish as to choose this compound of oxygen and carbon, while only 15 males resorted to it. On the other hand, 67 men resorted to hydrocyanic acid, and 33 to the oil of bitter almonds, while only eight women had resolution to swallow the former fatal poison, and 18 the latter. Strychnia was used by one man and one woman, and in one case camphor was used. But hanging is by far the most general mode of suicide, for nearly half of the annual average of suicides terminate their miserable lives by suspension. Cut-throats and drowning stand next in order of frequency; 8-10ths of all the suicides are committed in one of these three ways. Suffocation, by the fumes of charcoal, is by no means a favorite mode of suicide here as in France. The greatest number of suicides occur between the ages of thirty-five and forty-five. Thirty-three persons of both sexes committed suicide at ten years of age, and fourteen persons of both sexes at the age of 83.

A Few Globules for Homœpathy.—Having gone through a small course of Homœpathy, and fairly digested its merits, we have come to the following inevitable conclusion. "What you tell us that is true is not new, and what you tell us that is new is'nt true."

The latter part of our judgment, or "what you tell us that is new," has reference to the assertion of the Homœopaths that they

cure an average of a hundred and five per cent. of all their cases; and this, too, by the administration of infinitesimal doses.

With regard to the former portion, or "what you tell us that is true," we mildly take it upon ourselves to assert, that the doctrine of "*similia similibus curantur*" was known and practiced long before Hahnemann, or any other man of their school, saw the usual polychromatic light suspended over his medical door. Instances of this are as plentiful as cases in the Divorce Courts. From the beginning of the world, ever since Mr. Bacchus planted the vine, we have every reason to believe that men have occasionally taken "a little too much," and cured themselves next day, "by a hair of the dog that bit them," a clear case of "*similia similibus.*"

Again, "setting a thief to catch a thief," is as old as the hills,"—even those that "flesh is heir to."

There is yet another instance of this doctrine, well known in days of yore, in the following nursery lines:

> "There was a man of Teddington, and he was wondrous wise,
> He jumped into a quick set hedge, and scratched out both his eyes,
> And when he saw his eyes were out, with all his might and main,
> He jumped into another hedge, and scratched them in again."

We leave Homœpaths in the midst of this quick-set hedge, to get out of it the best way they can. It is so clear a case of "like curing like," the blindest bigot in the efficacy of globules must see it. There is blindness produced by the Wise Man of Teddington jumping into a hedge, and scratching his eyes out; and then by going through another hedge, and the same process of scratching his eyes, he recovers them in less (to speak vulgarly,) than two winkings.

Although we fancy we must before this have convinced all reasonable persons that "like having the power of curing like," is no new idea, still we cannot conclude without quoting one last, but no small authority upon the point, which we imagine is dead against the atomic theory of infinitesimal doses. We do not recollect ever having heard it quoted by the Homœopaths themselves in support of their argument. We, therefore, beg, in all good feeling, to present it to them for their special benefit and behoof:

> "A little money is a dangerous thing,
> Drink deeply, or touch not the Pierian spring;
> There shallow draughts intoxicate the brain,
> *But drinking deeply sobers us again.*"

This last line leans a little to the "*similia similibus*" creed; but we make the Homœopaths a small present of it, giving them full liberty to extract what benefit they can from it, as a proof we do not wish to be hard upon them. Meanness is the test of a little mind, and we do not profess do deal in little things, as though we were no better than a Homœopath.—*Punch.*

Mortality amongst Miners.—Investigations of the causes of mortality amongst special classes have a definite object apart from any general sanitary inquiries. They seek to discover particular causes of enhanced mortality, determine the nature of these causes, and estimate their relative preventability. The excessive mortality of miners has frequently engaged public attention; and in so far as it is the result of accident and calamity, mechanical means, however imperfect, have been devised, and will continue to be suggested from time to time, tending to lessen the frequency of such catastrophes. But the main part of the excess of mortality amongst this class of men is hardly traceable to such causes. The life of the miner and of his children is cut short by fatal and premature disease. This does not burst forth violently, and sacrifice suddenly some dozen lives, under accompaniments so moving as to attract the eyes of a nation; as when the destructive demon of fire-damp breaks loose, or a volume of steam bursts its iron bounds, and scatters cruel strokes of death around. It employs the weapons under which men die daily on all sides; the familiar destroyer of English homes; household words in the Registrar-General's office. Consumption, pneumonia, hooping-cough, marasmus, are more fatal, but less portentous agents of destruction; they work slowly, successfully, and without making any stir.

Attention has been particularly directed to the premature death of pitmen by the investigations set on foot with the view of providing data for calculations necessary to the establishment of a Miners' Provident Association. It has been shown that whereas, amongst the ordinary population of 100,000 persons alive at the age of 18, there are 46,015 living at 65; at the same age, out of a similar number, there are only 39,687 pitmen, the difference being owing to the excessive mortality in miners in early life. At the age of 70, there are remaining of ordinary lives, 34,901; of pitmen, 28,895.

The sickness reports of Mr. Ratcliffe show "a very large amount of disease amongst this class at every period, and an increased sickness with an advance of years. At the age of 20, miners experience an average sickness of 46 per cent. more than the general class; at 30 years, they have 70 per cent.; at 40 years, 78 per cent.; at 50 years, 76 per cent. more than the average sickness of the general class of lives." These and other circumstances in relation to sickness and death rates introduce peculiar difficulties into any scheme aiming at the adjustment of equitable tables for provision of sickness allowance. At present none exist.

Having thus far ascertained the broad statistical outlines of life value amongst the mining population, preventative medicine has a further mission—namely, to analyze the character and relative frequency of the fatal diseases, and to point to the conditions which favor them, and the provisions by which they may be combated. This we are glad to find that Mr. Richard Couch, surgeon of Cornwall, is ably accomplishing for a large section of the Cornish miners. In a paper on the "Mortality of the Miners in the District of Lelant," published in the Twenty-sixth Annual Report of the Royal Cornwall Polytechnic Society, Mr. Couch seems to establish conclusively that the occupation of the miner is mainly destructive to health by the disposition which it gives to fatal pulmonary disease. The mortality from thoracic affections amongst the miners is always more than that arising from all other causes combined, and, in most cases, is nearly double that found in the general population living in the same district. If we take the six years terminating in 1857, we find that amongst miners consumption gave an average mortality of 55.4 contrasted with 19.3 on the general population. Compared with other surrounding laborers it is observed of the miners that after crowding at home, they are in a worse atmosphere while at their daily work than even in their dwellings. Again, with exception of the Saturday afternoon and the Sunday, the miner has for months together but little enjoyment of the sun. These causes of death Mr. Couch promises to examine further, and subsequently report upon them. We call attention to his researches as of an eminently practical and philanthropic character, and such as may be very usefully imitated in all other mining districts.—*Lancet, Oct.* 22, 1859.

FORMATION OF ADIPOCIRE.—Prof. John C. Dalton, Jr, exhibited to the New York Pathological Society a body which had undergone complete transformation into *adipocire.*

As far as could be ascertained, the body was buried in 1832. It was found in a cemetery, or rather a pit in the upper part of the city, which was dug out for the reception of cholera patients. The bodies were placed in separate coffins, but not in separate graves. The coffin containing this body was found about twenty feet beneath the surface; underneath it there were three tiers of coffins, and above it nine or ten. The uppermost tier of coffins was covered by three or four feet of solid earth. The soil directly under the coffin in which the body was found, was very watery; above this level there was but little water, although the ground was very moist. The bodies contained in this part of the pit were melted together in a semi-fluid mass, the usual result of decomposition under ordinary circumstances.

At the water-mark there were several bodies converted into adipocire. The specimen presented, however, was the most perfect. The hands and feet have been rattled off during transportation. When the body was first taken out, its colour was almost precisely the same as now—a dullish white. If anything, it has become a little more brownish. It has now been exposed to the air for three months. Its consistency was decidedly less when first removed; it was then like cheese of medium consistency; a mixture of the ductile and the brittle. In handling it, great care had to be used. At that time, it exhaled a tolerably strong odour; partly cheesy, ammoniacal, and earthy. Since that time, the cheesy and the earthy odours have disappeared; the ammoniacal smell, however, is still perceptible. In other respects, it appears not to be altered in the least, and Dr. Dalton presumes it will remain in the same condition for years; for centuries, if properly taken care of.

The body is that of a large, fat woman, between forty-five and fifty years of age; evidently a woman past the prime of life. The anterior parietes have sunk very much, particularly those of the abdomen, which appear to be in contact with the spinal column. The anterior portion of the chest is also collapsed. The change of animal tissue to the adipocire is absolutely complete in all the tissues, except the hair, nails, and bones. The papillæ of the skin can be distinguished, but the other tissues cannot be made out.—*New York Monthly Review,* November, 1859.

Removal of an Undescended Testis.—On Thursday last we witnessed an operation by Mr. Curling at the London Hospital, for the removal of an undescended testis. The circumstances under which this measure had become desirable were briefly as follows: The patient was a married man, aged 31, the father of two children. He was of cachetic and somewhat downcast aspect. His left testis occupied its usual position in the scrotum, but was not at all larger than natural, and was somewhat flabby. His right testis had never passed the inguinal ring, and could be felt as a softish swelling about the size of a small pigeon's egg. For two years past the man had been liable to attacks of pain in the part, and had also suffered much from aching in the loins and back. The gland had at times swollen considerably, especially after exertion. Mr. Curling informed us that on one or two occasions during the last year, when the man had consulted him on account of pain, there had been a decided degree of hydrocele. The fluid, had, however, always been absorbed spontaneously, and paracentesis had not been necessary. The repeated attacks of pain and inconvenience had at length induced the man to wish for its removal, and Mr. Curling, after a careful examination in order to ascertain that the malposition was not complicated with hernia, had decided to accede to his request. The operation was conducted with great care. The gland after removal was found to be in an atrophied condition, and it was very questionable whether it contained any efficient secreting structure. (Mr. Curling stated subsequently that he had made a microscopic examination, and found no spermatozoa in its fluid elements.)

In some clinical remarks on this case, Mr. Curling adverted to the fact that undescended testes are frequently in a state of atrophy and functionally useless. He had therefore felt no unwillingness to remove what had become a source of serious inconvenience. In answer to a question, as to whether in cases in which one testis only is descended, and the other remains in the inguinal canal and undeveloped, he had noticed compensatory enlargement of the descended gland, he replied, that he had not done so. He believed that the general result of his experience had been that, as in the present instance, the descended gland remained of only average size.—*Med. Times and Gaz.*, Oct. 15th 1859.

Effects of a Horse Bite.—The wounds produced by the bites of animals often take on a most unhealthy action, and, besides destroying the parts which have been injured, occasionally prove fatal; and this even when the animal is healthy. An elderly and stout man was recently admitted into the Middlesex Hospital, under Mr. Flower's care, suffering from the effects of a bite on his right hand by a horse. The part more particularly injured was the forefinger, which was much lacerated and bruised, and formed a most unhealthy wound, accompained by suppuration, with finally sloughing of some of the tendons of the long flexors. It was impossible, therefore, to obtain a useful finger in the event of the morbid action being arrested, and accordingly the entire digit was removed by Mr. Flower, including the metacarpo-phalangeal joint. There was much sanguineous oozing, and the wound was not fairly closed until two or three hours afterwards, which was accomplished by means of metallic (iron wire) sutures. The man is now doing well.—*Lancet*, Oct. 22, 1859.

Inoculation of Diphtheria.—Two facts of some importance were brought before the Medical Society of the Hospitals of Paris on the 24th of August last. One relates to a medical practitioner whose finger was wounded by a knife which had been used in the operation of tracheotomy, performed upon a child suffering from diphtheria. An abscess formed in the wound, but the latter was going on favorably when, a fortnight subsequent to the accident, pain in the throat was complained of, after exposure to cold, and diphtheritic effusion took place on the tonsils. The practitioner's wife became similarly affected, but they both recovered, though one had consecutive paralysis, which lasted four months. The second case is that of a medical student who, already suffering from cough and cold in the head, made the post mortem examination of a child who had died of diphtheria. He accidentally pricked his left thumb whilst engaged upon the autopsy, and this was followed, in spite of careful washing, sucking of the wound, and abundant bleeding, by inflammation of the lymphatics up to the axilla. On the third day after the infliction of the wound, and the fifth after the beginning of the cough (which had arisen after exposure to cold), pain in the throat occurred. The arm went on improving, but the throat became worse, and false membranes formed upon the tonsils. An

herpetic eruption on the lip followed, and the patient had quite recovered in about ten days. The question now was to determine whether these two cases were to be considered as examples of inoculation of the disease, or as instances of simple epidemic influence· Most of the members of the Society inclined to the latter opinion, and many of our readers will, perhaps, agree with them. We must, however, confess that one of the arguments brought forward against the transmission of the disease by inoculation is to us not satisfactory—viz., that the false membranes appeared a fortnight after the puncture. Might not this lapse of time have been taken up by incubation ? It is, however, proper to mention that, from actual cases, M. H. Roger has found the mean of the time of incubation to be from two to seven days.—*Lancet,* Oct. 22, 1859.

Altered Positions of the Heart in Health —A girl, aged 18, entered the clinical wards of Professor Bruns, suffering from an enormous sub-umbilical intestinal fistula. Through the opening the finger was readily passed, and the abdominal aorta, the kidneys, the pancreas, and the liver might be felt. In passing the finger between the liver and diaphragm, the point of the heart could be readily felt, and hereon the following observations were made : The patient being erect, and the finger applied against the inferior walls of the ventricles, there was felt at each systole a short, dry knock, slipping a little on the diaphragm, the apex of the heart at the same time becoming hard, and moving a little to the left. The blow was perfectly visible externally on the walls of the chest. The result was the same when the girl leaned forward, only the blow was stronger ; on the contrary, when she leaned backwards, the finger being kept on the same spot, there was an instant observed when the heart's movement was neither seen nor felt. Other experiments showed that the heart does not retain an invariable position, as Helmerich imagines.—*Med. Times and Gaz*, Oct. 15, 1859.

Paris Society of Surgery.—This body has just been recognized officially by the French Government as an " establishment of public utility "—a proceeding equivalent to that of granting a charter in this country. The society was founded in 1843, by 17 hospital sur-

geons, having M. Bérard, Jr., as its first president. At the present time it consists of 35 titular members; 7 honorary members, among whom are MM. Velpeau and Cloquet; 11 members of the Academy of Medicine; 46 national correspondents, almost all of whom are at the head of the principal civil and military hospitals; 16 foreign associates; and 28 foreign correspondents—making in all 143 members. During the fifteen years of its existence, the society, in spite of the various events which have occurred, has never suspended its meetings, and has always continued to labor zealously. It has published four and a half volumes in 4to. of valuable memoirs, and eight volumes in 8vo. of "Proceedings." It has also established prizes; and has succeeded in inducing the most illustrious names of modern surgery to participate in its labors.

A Most Remarkable Case.—A most singular case occurred in the year 1831, and which at the time created great sensation. On the 26th of February of that year, a man named John Toylor, aged twenty, a native of Prussia, was at work as a sailor on board the brig Jane, of Scarborough, then in London Docks; and while guiding the iron pivot of the trysail mast into the mainboom, the tackle broke, and the mast, which was 39 feet long, and 600 pounds in weight, descended upon Toylor. The iron pivot tore off half his scalp, which fell over his face; then strking his lower jaw, broke it, and knocked him down; lastly, piercing his chest obliquely, came out in the lower part of his back, and fixed in the deck. When thus transfixed and otherwise injured, the man subsequently stated that he felt no pain. "I was in heaven," said he; nor was he at all inconvenienced during the withdrawal of the mast from his body by his fellow seamen, but immediately afterwards experienced "unutterable agony," and at each act of respiration the air rushed out from the wound in his chest, proving thereby that the lung was injured. He was carried to the London Hospital, where he so far recovered in five months, from the effects of his severe injuries, as to be able to walk a distance of some miles. He ultimately returned to his duty as a sailor, and has ever since, during a period of twenty-seven years, enjoyed, without interruption, the most excellent health.—*Lancet*

Thesis for an Honorary Degree. — The Nashville *Journal* says, that a botanic doctor "out west" being desirous, as he expressed it, of practicing "both ways," determined to apply for an honorary degree at a regular college. He was told that he must write a thesis, that the faculty might be able to judge of his preliminary qualifications, when the following was actually produced:

"Gineral symptoms of conges'ive feavour. small Deprexed pulce, cold Extrematis, cule Dry skin, frecant bateing or palpatiation over the Kidneys or the back or lunges. In this diseaze we sildem ar vomit, the treatemint Must Be agreeable To the strength and Habit of the patint let your obgect Be To oppurate will on the kitney and liver and Blead.

Bilis feavour.

full high pulce pane in the heade and Back Grate sickniss of the stomack chiles bleade, vomit, and use Carthickes frealy.

fevour and ague.

pane in the head Back and shakink vomit purge dont Bleade. use stimulating Medison To Brake the ague. use Musturd Plastur.

Plurisee.

Pane in the Right side cough spitting Blood Depresed pulse some fevour and thirst cule feet some Times pane in the head. Bleade frealy use carthickes and Expepturants flax-sead Tea Blistering &C.

inflamatory plurisee.

pane in the Left side palpitation of the hart high feavour Read spoets on the cheak at Times. theris but little difference between this and what is genarly cald winter fevour.

act on the liver use Experants flax seade Tea Elum warter Blistur sweating Tea &c. use for Experants 1 Grane quinine 2 Granes Epecack ½ Grane Morphen &C & &C.

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PART FIRST

ORIGINAL COMMUNICATIONS.

Notes on some of the chemical reactions of Narcotine and Meconic Acid. By T. G. Wormley, M.D.

In the present article it is proposed to give some of the chemical reactions by which two of the *proximate principles* of opium may be recognized. The method of applying the tests is the same as that given in previous articles in regard to various alkaloids.

Narcotine.

Pure crystallized narcotine was dissolved in water, just sufficiently acidulated with hydrochloric acid to effect solution, and the reagents were applied to a grain of this solution.

1. Potash.

1. $\frac{1}{100}$th, grain of narcotine in one grain of water, when acted upon by a small drop of potash solution, gives an immediate copious white amorphous precipitate, which is insoluble in excess of potash, but dissolves readily in a few drops of strong acetic acid.

2. $\frac{1}{1000}$th, gives an immediate white amorphous precipitate which after some little time is changed into beautiful groups of branched crystals which are very characteristic.

3. $\frac{1}{5000}$th, an immediate precipitate, which very soon is crystalline. If there be much excess of the reagent, the precipitate will not be produced.

4. $\frac{1}{10000}$th, an immediate cloudiness, which almost immediately becomes crystalline, and after a little time there is a rather abundant deposit of aciculated and branched crystals.

5. $\frac{1}{20000}$th, a perceptible cloudiness, soon much the same as in 4.

6. $\frac{1}{40000}$th, only a faint cloudiness at first, but very soon there is a deposit of aciculated crystals, which when examined by a microscope are rather abundant. In applying the reagent to solutions as dilute as this and the one preceding, it is necessary to use the least possible quantity, otherwise there will be no deposit.

2. Ammonia.

1. $\frac{1}{100}$th, grain of narcotine gives with ammonia an immediate white curdy precipitate, not readily soluble in excess of reagent, but readily, in a few drops of strong acetic acid. After a little time the precipitate becomes crystalline, the crystals having the same form as those produced by potash.

2. $\frac{1}{1000}$th, much the same as 1.

3. $\frac{1}{5000}$th, an immediate cloudiness, which very soon becomes crystalline; to obtain the ppt. the least possible quantity of reagent must be used. By suspending, for a few moments, a drop of ammonia over the narcotine solution, the latter is covered by a white cloudiness, which very soon becomes crystalline.

4. $\frac{1}{10000}$th, by applying the vapor of ammonia, no cloudiness is produced, but soon there is a very good deposit of crystals.

5. $\frac{1}{30000}$th, by using a small quantity of the ammoniacal vapor, there is soon produced a pretty fair deposit.

The carbonates of potash and ammonia, behave in the same manner as the alkalies. Several specimens of iodide of potassium gave, also, the same reactions, and the same crystalline form.

3. Chromate of Potash.

1. $\frac{1}{100}$th, gives an immediate copious yellow amorphous precipitate, which is readily soluble in acetic acid.

2. $\frac{1}{1000}$th, a yellow precipitate, soon crystals, same as produced by potash.

3. $\frac{1}{5000}$th, much the same as 2. Much increased by stirring.

4. $\frac{1}{10000}$th, no immediate precipitate, but very soon a good crystalline deposit, especially by stirring.

5. $\frac{1}{30000}$th, in a few minutes a quite perceptible crystalline precipitate.

4. Bichromate of Potash.

1. $\frac{1}{100}$th, gives an immediate copious yellow amorphous precipitate, which after some time becomes granular. The precipitate is soluble in excess of acetic acid.

2. $\frac{1}{500}$th, a light yellow precipitate, very soon granular.

3. $\frac{1}{1000}$th, no indication after some time.

5. Sulphocyanide of Potassium.

1. $\frac{1}{100}$th, gives a white amorphous precipitate, soluble in acetic acid; the precipitate does not become crystalline by standing.

2. $\frac{1}{1000}$th, very soon, especially by stirring, a deposit of groups of prismatic crystals.

3. $\frac{1}{5000}$th, much the same as 2.

4. $\frac{1}{10000}$th, after a little time by stirring, quite satisfactory.

6. Ferrocyanide of Potassium.

1. $\frac{1}{100}$th, gives an immediate dirty white amorphous precipitate, which dissolves in an excess of reagent, but is reproduced upon the further addition of the reagent. The precipitate is readily soluble in acetic acid.

2. $\frac{1}{1000}$th, gives a permanent precipitate with an excess of reagent.

3. $\frac{1}{5000}$th, a pretty good precipitate.

4. $\frac{1}{10000}$th, upon agitation gives a good cloudiness.

5. $\frac{1}{20000}$th, no indication after several minutes. None of the above deposits become crystalline.

7. Ferricyanide of Potassium.

1. $\frac{1}{100}$th, gives a bright yellow amorphous precipitate, permanently soluble in excess of reagent.

2. $\frac{1}{500}$th, by using a small quantity of reagent, a quite perceptible precipitate, readily soluble in excess.

8. Carbazotic Acid.

1. $\frac{1}{100}$th, gives a bright yellow precipitate which does not crystallize upon standing.

2. $\frac{1}{1000}$th, a greenish yellow precipitate, soluble in excess.
3. $\frac{1}{10000}$th, gives a quite obvious amorphous deposit.
4. $\frac{1}{20000}$th, a just perceptible cloudiness.

9. Terchloride of Gold.

1. $\frac{1}{100}$th, gives an immediate yellow amorphous precipitate, which nearly all dissolves upon heating, leaving a few orange gum-like masses; upon cooling the precipitate is reproduced. There is little or no reduction of the reagent upon the application of heat; in this narcotine differs from morphia.

2. $\frac{1}{1000}$th, gives a good yellow precipitate which does not all dissolve in several drops of potash solution, nor does the solution darken as in morphia. The precipitate is soluble in several drops of acetic acid.

3. $\frac{1}{10000}$th, gives a good greenish yellow precipitate.
4. $\frac{1}{20000}$th, very soon gives a quite perceptible precipitate.
5. $\frac{1}{40000}$th, only perceptible, not satisfastory.

10. Bichloride of Platinum.

1. $\frac{1}{100}$th, gives a light yellow amorphous precipitate, which nearly all dissolves by heat, and is reprecipitated upon cooling.
2. $\frac{1}{1000}$th, a pretty fair precipitate.
3. $\frac{1}{2500}$th, no indication.

11. Tannic Acid.

1. $\frac{1}{100}$th, gives only a slight dirty white precipitate.

12. Acetate of Potash.

1. $\frac{1}{100}$th, grain of narcotine gives with acetate of potash, an immediate copious white amorphous precipitate of acetate of narcotine, which readily dissolves in a drop of strong acetic acid, but is insoluble in excess of reagent. After a little time the precipitate becomes crystalline, giving beautiful groups of acicular crystals which radiate from a common centre.

2. $\frac{1}{1000}$th, gives a distinct cloudiness, which very soon changes to a rather abundant deposit of branched crystals, and ultimately as in 1.

3. $\frac{1}{5000}$th, no immediate deposit, but very soon crystalline needles appear, and after a little time there is a very good precipitate.

4. $\frac{1}{10000}$th, in a few minutes crystals appear.

5. $\frac{1}{20000}$th, in less than ten minutes needles begin to form along the edge of the drop, and in a little time the deposit is very satisfactory.

The *acetates of baryta, zinc,* and *lead,* give much the same reactions in a hydrochloric solution of narcotine as those given above for the potash salt. In the first, second and third solutions, no difference is observed; in the fourth, the precipitate is more slow to appear, and perhaps not so abundant, especially when the lead salt is used the deposit does not appear for several minutes: in the fifth case, the same difference was observed between the potash salt and those of baryta and zinc, and no crystals were observed in the lead solution after standing one hour.

The above reactions point out a new test for acetic acid, however, we might state that the acetate of narcotine, when produced from the baryta or potash salt, is somewhat soluble by a solution of chloride of narcotine.

13. Iodine in Iodide of Potassium.

1. $\frac{1}{100}$th, gives a copious red brown amorphous precipitate, which is soluble in several drops of strong acetic acid, but not readily, in a large excess of potash. An excess of reagent should be used, otherwise the precipitate, first produced, will be dissolved.

2. $\frac{1}{1000}$th, much the same as 1.

3. $\frac{1}{10000}$th, a brownish precipitate, which dissolves in a drop of potash solution without the production of a white one as in strychnia.

4. $\frac{1}{30000}$th, a brown yellow precipitate, quite copious.

5. $\frac{1}{80000}$th, a good green yellow precipitate.

6. $\frac{1}{100000}$th, by allowing a drop of the reagent to flow into the narcotine solution, a very perceptible precipitate is produced.

7. $\frac{1}{300000}$th, in about a half minute, the precipitate is quite obvious.

8. $\frac{1}{500000}$th, the precipitate is still perceptible.

14. Bromine in Bromohydric Acid.

1. $\frac{1}{100}$th, gives a copious bright yellow precipitate, which soon dissolves if there is not an excess of reagent.

2. $\frac{1}{1000}$th, the precipitate is readily soluble in potash, but is immediately replaced by a white one.

3. $\frac{1}{10000}$th, much the same as 2, but only a trace of white precipitate.

4. $\frac{1}{20000}$th, a dirty yellow precipitate.

5. $\frac{1}{80000}$th, gives a green yellow precipitate.

6. $\frac{1}{150000}$th, gives a quite obvious precipitate.

7. $\frac{1}{250000}$th, the precipitate is still perceptible.

15. Sulphuric and Nitric Acids.

1. $\frac{1}{100}$th grain of narcotine, when acted upon by a small drop of strong sulphuric acid, dissolves with a yellow solution, if now a small crystal of nitrate of potash be added, the crystal becomes blood red, which after a time dissolves, giving a blood red color to the solution, which after a time changes to orange, If the nitrate of potash be first dissolved in the acid, and then the mixture be allowed to flow upon the narcotine, the deposit immediately becomes blood red, and slowly dissolves, giving a solution of the same color.

2. $\frac{1}{1000}$th, dry; if the mixture of sulphuric acid and nitre be allowed to flow upon the deposit, it immediately becomes blood red, and soon dissolves giving a yellow solution.

3. $\frac{1}{10000}$th, the deposit becomes red, but very soon dissolves with a yellow solution.

4. $\frac{1}{20000}$th, gave no indication.

16. Sulphuric Acid and Bichromate of Potash.

1. $\frac{1}{100}$th, when the dry residue is dissolved by a drop of strong sulphuric acid, it gives a yellow solution, which when treated with a very small crystal of bichromate of potash, changes to a fine wine color, which remains permanent for days; if an excess of the potash salt be used, the mixture passes through several colors and ultimately becomes blue. The permanent color is readily obtained by stirring the potash crystal in the acid solution of the narcotine till it imparts a wine color, and then removing the crystal from the solution.

2. $\frac{1}{1000}$th, if a small crystal of the potash salt be stirred in a drop of sulphuric acid till it imparts a distinct color, and then the mixture be allowed to flow upon the narcotine, the deposit becomes red or brown, and then dissolves with a color dependent upon the amount of potash salt used.

3. $\frac{1}{5000}$th, the deposit gives a brown color.

The change of colors observed in the application of this test might cause the inexperienced to mistake narcotine for strychnia.

Meconic Acid.

When necessary, the meconic acid was dissolved by the aid of a gentle heat.

1. Sesquichloride of Iron.

1. $\frac{1}{100}$th, grain of meconic acid in one grain of water, will give with a solution of sesquichloride of iron, an immediate blood red

solution, the color of which is not affected by several drops of a solution of corrosive sublimate or chloride of gold.

2. $\frac{1}{1000}$th, much the same as 1.

3. $\frac{1}{10000}$th, gives a decided red color to the solution, which when compared with a drop of the reagent is very marked.

4. $\frac{1}{20000}$th, gives a faint red solution, but not satisfactory; if several drops of the meconic acid solution be used, the color is very decided.

If the meconic acid solution be evaporated to dryness and the reagent applied to the residue,—

1. $\frac{1}{10000}$th, the deposit becomes deep blood red.

2. $\frac{1}{40000}$th, the red color is very distinct.

3. $\frac{1}{80000}$th, the color is just perceptible.

It is well known that several other substances beside meconic acid, give much the same reaction with sesquichloride of iron, those most likely to be met with are the sulphocyanides, or acetates, or their acids. The color produced by the sulphocyanides is immediately discharged by a solution of corrosive sublimate, whereas the color developed by meconic acid is unaffected; again, the color produced by acetic acid or acetates, is not discharged by corrosive sublimate, in this respect it agrees with meconic acid, however, the color produced by one drop of $\frac{1}{5000}$th solution of meconic acid, is more intense, than that produced by a drop of concentrated acetic acid: the color of the meconic acid is discharged by a drop of sulphuric acid, with the evolution of much gas, whereas, that produced by acetates is destroyed without the production of gas.

2. Acetate of Lead.

1. $\frac{1}{100}$th, gives with this reagent, an immediate yellow-white amorphous precipitate, which is insoluble in acetic, but readily in nitric acid.

2. $\frac{1}{1000}$th, gives a bluish precipitate.

3. $\frac{1}{20000}$th, in a few seconds a distinct opalescence, which in a little time collects into little flocks.

4. $\frac{1}{50000}$th, in a few minutes a distinct opalescence, which after a time collects into little bluish flocks.

There are many other substances which produce with acetate of lead white precipitates much the same as those produced by meconic acid, of these we may mention: 1. Sulphocyanides; these give a pure white precipitate, soluble in acetic acid, and when from dilute

solutions, readily in nitric acid. 2. Chlorides; a white precipitate, which when from chloride of sodium, will readily dissolve in excess of reagent, acetic, or nitric acid; if the precipitate be due to free chlorine, it will not readily dissolve either in acetic or nitric acid. 3. Sulphuric acid, or sulphates; the precipitate is insoluble in acetic, and sparingly in nitric acid. 4. Soluble carbonates; a white precipitate soluble with effervescence in acetic acid. 5. Phosphates; insoluble in acetic, but soluble in nitric acid. 6. Oxalates; same as phosphates. Of the above substances, it will be observed that the precipitates produced by sulphocyanides, chlorine, and carbonic acid, are soluble in acetic acid; that produced by sulphuric acid, is insoluble in acetic and nitric acid; those from phosphoric, oxalic, and meconic acids are insoluble in acetic, but soluble in nitric acid; chloride of calcium will give a white precipitate with either a phosphate or oxalate, but none with meconic acid.

Another method of distinguishing the meconate from the sulphocyanide of lead, is to add to the precipitate a few pieces of zinc, and then a few drops of sulphuric acid, when the meconate mixture will evolve pure hydrogen, whereas, the sulphocyanide will yield sulphuretted hydrogen.

3. Sulphate of Copper.

1. $\frac{1}{100}$th, gives an immediate copious green precipitate, which is soluble in excess and in acetic acid.

2. $\frac{1}{500}$th, a slight precipitate which increases by standing, collecting in little bluish flocks.

4. Nitrate of Silver.

1. $\frac{1}{100}$th, gives a white amorphous precipitate, readily soluble in ammonia, but insoluble in acetic acid.

2. $\frac{1}{1000}$th, in a few seconds a dirty white precipitate.

3. $\frac{1}{20000}$th, after a little time a slight opalescence, which improves by standing.

5. Chloride of Barium.

1. $\frac{1}{100}$th, after a little time, especially if stirred, a granular and crystalline precipitate, the crystals are of various forms and characteristic, many of them being dumb-bell shaped. In solutions much more dilute than the above the reagent gave no indication.

6. Ferricyanide of Potassium.

1. $\frac{1}{100}$th, after a little time, especially if stirred, green yellow hair-like crystals appear, which after a little while are abundant, these crystals are very characteristic. The ferrocyanide of potassium gives the same form of crystal, but they are much more slow to appear.

2. $\frac{1}{500}$th, no indication after some time.

Meconic acid dissolves in sulphuric acid without change of color, if then a crystal of bichromate of potash be stirred in the mixture it becomes a slight green.

None of the various tests given for narcotine, except those stated, will give a precipitate with meconic acid.

Columbus, Ohio, Feb. 17th, 1860.

An Interesting Case of Malingering. A woman passes "black balls" from her vagina, and simulates hysterical convulsions, in order to obtain opium. Reported by Wm. A. Brown, student of Medicine, McConnelsville, Ohio.

Jalap purges and Ipecacuanha vomits, saith the book—and the book saith much else besides—yet the mind wearies of vomits and purges, of fevers and inflammations, and delights occasionally to dip into the wonderful and strange. Progress is the order of society, and every day shows us "something new under the sun," Ecclesiastes to the contrary, notwithstanding. But science has never as yet come up to the consideration of certain black lumps that may be passed from a woman's vagina; and no physiologist has, in the widest range of his subject, treated of this periphenomenon we are about to describe,—a fact that may be added to the many more that show "there are more things in heaven and earth than are *dreamed* of in our philosophy." Excellent, merry old Chaucer says that—

"———————— the Doctour of Phisike,
In all this world ne is ther non him like
To speke of Phisike and of Surgerie;
* * *
He can tel the cause of every maladie
Whether it be of hote or cold or moist or drie,
And wher engendered, and of what humour."

But notwithstanding this honest assertion of the good old poet, it has been known for ages that there *are* penetralia beyond human ken. Yet by the combined efforts and labors of men of science in this enlightened age, we are slowly unfolding the mysteries of the universe, by the gradual addition and accumulation of Facts, which, standing for awhile isolated, finally, and without compulsion, crystalize into truth. Yet, it seldom falls to the lot of the man of medicine, in the course of an ordinary lifetime, to be enabled to indulge himself in philosophic reflection on a concatenation of circumstances in any particular *case* that may fall into his care, whereby he is led to the development of some great truth. Such was the fact, however, in the circumstance we are about to relate.

A pauper, named A. C., had been a charge upon Morgan county for a great many years, and had been much trouble to the authorities and a great expense to the people, as the treatment of her case had not been included in the fees for medical attendance upon the public's vagabonds. The Infirmary Directors, who were aware that she was exceedingly troublesome and required a great deal of medical attention, having long understood that she labored under a very strange "irregularity" of the uterine function, were always anxious to have her included in the regular fees for attendance, and rid themselves of the annoying expense she incurred. A certain physician agreed to do the county's business for a stated sum, not excluding A's case, and his proposition was readily accepted by the authorities. In a few days the Doctor was called to remove one of the woman's "black balls;" but while doing so she had a terrible convulsive fit, which induced him to break his engagement, saying he would not do the business for "a thousand dollars." So a successor was duly employed, who succeeded much better, however, in treating her for her "irregularity." The Doctor adopted a "palliative" treatment, and the remedies he employed were "opiates" which the poor woman assured him acted like a charm in calming the constitutional irritation attending such a harrassing "irregularity" as she was subject to, and completely controlling the distressing convulsions. The Doctor was one of those men who believe that Corporal Nymisphilosophy is not the worst that has been preached in the world. "Things must be as they may," and while his palliatives satisfied her wants did not feel inclined to trouble his brain much about the *ultimate cause* of her distressing complaint(?) but continued to enjoy his ease of body and tranquility

of mind, allowing himself to be undisturbed by transcendental pathology and speculations about the blood;—"*rerum cognoscere causas*" was not the Doctor's motto. The case was becoming somewhat notorious; although little was known in regard to it, yet many physicians had heard of "the woman who passed black balls from her vagina," and a few were the glad possessors of specimens of these mysterious lumps; but were yet, very naturally, somewhat "skeptical."

Finally, in the order of events, Drs. Brown and Little were the attending physicians, and having understood that her case presented some *peculiarities* seldom offered to the observation of the medical man, they of course felt considerable desire to make some investigations into the cause and character of this unheard of morbus, though not very *firm* in the belief of the real "existence of things" as commonly understood. But a short time elapsed until they were gratified with an opportunity to enter into the study of her wonderful vaginal formations. One day a messenger arrived with information that the woman was taken with one of her "spells" and Dr. Brown went down. He delivered her of a black ball about the size of a goose egg which was close up to the os uteri, during which procedure the woman simulated acute pain, and very near went into one of her "convulsions." The Doctor found it impossible for him to resist the belief that she was of that species of "genus homo" known to Naturalists as the "humbug."

After he had extracted this curious mass from her vagina, however, he yielded to her entreaties and gave her some opium, which she declared "always made her feel better afterwards." He then examined the ball which he found to be of the consistence of moderately dry dough, and of a blackish color; he broke it up and discovered in its substance a small piece of *sewing thread*. "Ah, what have we here," thought the Doctor as he at once realized the nature of the case and had all his suspicions confirmed. It was evident there was no physiological function by which thread was secreted; *ergo*, the woman has been simulating a queer disease in order to obtain opium. Such was the fact. She manufactured the balls out of dough, colored them black, then stuffed them into her vagina, and sent off for the physician to extract them, when she would plead with him for opiates to quiet the nervous "agitation of such a travail." The object was now to discover her method of coloring them, which seemed somewhat puzzling; but it was afterwards

ascertained, by observation about the premises, that she used an infusion of maple bark and coperas. She had been practicing this ruse successfully for the period of *ten years* previous to the time when Drs. Brown and Little took charge of the Infirmary, and I presume conceived herself to be still succeeding finely with her favorite deception, by which means she had for so long a period obtained happiness by the lump. The Doctor was amused both with the trick and the discovery and said nothing for the time being, anticipating a little professional sport would grow out of it. When he returned home he informed Dr. Little, that, as they had suspected, the woman was "tricky" and her disease all a fabrication. It was not long until she felt like indulging in opium again, and accordingly was taken with another "spell" to gratify her desire. They both went down to the Infirmary and "operatad successfully" in bringing away another black ball, and gave her some more opium, but not intimating that they were aware of her efforts to deceive them. They found a long roll of the "composition" lying alongside her thigh, about as long and thick as the forearm, which she said she brought away herself. "I can always get the long ones away myself" she said, "but the little ones I can't. I can feel *them* coming down as *cold as mud.* Sometimes the long ones break, and then, oh, Doctor I have so much trouble and pain that it aint any use of me trying;" and then she groaned piteously. "You can feel the little ones come down as cold as mud, eh," asked the Doctor; "umph! a very remarkable complaint, indeed, madam." "It takes about a week for my womb to get full, and it's always soft at first; but afterwhile the water runs off, and leaves the hard stuff—as cold as mud, Doctor—and it makes one have fits, sometimes." In a short time afterwards, a couple of professional brethren of a neighboring city, who had seen one of the black balls, and heard of the woman, came to this place expressly to study the peculiarities of a case they had never before heard of or seen. When they arrived, the woman was informed of the fact, and she said "she had one in her now." The physicians were delighted with the opportunity to see the woman who was said to pass black balls from her vagina, and were taken down to see the "operation" of removing the same. Nothing but the pencil of a Darley could convey to you an adequate idea of the ludicrous scene which ensued. The physicians were skeptical and could not bring themselves to believe that those things were ever taken from a female. To pro-

tect them from the possibility of deception, they were assigned very advantageous positions, by the attending physicians, which they at once assumed. The woman was now placed on her elbows and knees, with her buttocks turned up to the light, and her clothes supported on her back by one of the spectators, while the other took a position about six feet from her, with his hands resting on his knees and watching attentively the parts from whence were to issue the wonder of wonders. When the manœuvre was accomplished, they had become fully satisfied that "black balls" really *did* come away, and were furnished with material for physiological theories, and learned disquisitions in uterine pathology.

The amusement now wearing out, however, the woman was informed by the attending physicians, when she had her next "spell," that they were and had been fully cognizant of her deceptions, and that she must now cease ; they would suffer no further annoyance, and that if she was taken in labor with a dough baby again she would have to be her own accoucheur, as they would pay no attention to her call. She cried, and swore, and stoutly denied the accusation ; but she was assured they were positive, when they informed her that if she put any more balls into her vagina she would have to take them away again herself. And so they left her pleading her innocence, and vowing she "could not make water ;" (she had always been catheterised after passing her lumps of dough ;) and came home under the impression that she would now become pregnant with black balls no more. She now found that her narcotic supplies were about to be cut off by the turn of affairs, and in the course of a week or two fell upon another method. A messenger came up one day and announced that the woman had "falling of the womb." "What shall we do," asked Dr. Little when he communicated to his colleague the messenger's information. "Pull it out!" replied the Doctor, "I will insure the result." So down the Doctor went, and examined his patient. He found what she called her "womb," extending half way down the thighs, and as soon as he felt it did not hesitate to adopt the advised treatment. "Oh, it must be *returned*, by all means," said the Doctor, for he knew if he would advise "extirpation" she would have had one of her "convulsions" immediately, and refused to have let him touch it. She was of the Doctor's opinion, and thought herself that it ought to be returned. So getting a firm hold of her womb and bracing his shoulder against her knee, he made a sudden jerk, and away it

came! Good heavens! did the man tear away her uterus? He pulled the thing out from under the bedclothes and examined it while she was going through a delightful convulsion. It proved to be a *beef's rectum* with one of her long rolls of dough in it, which she had run up into her vagina. "Oh! my God!" she exclaimed, "I'm caught again! To hell with my luck! I'll give it up, now, Doctor. I swear I'll do so no more!" And the Doctor, swelled up with a big laugh, retired to ventilate his humor.

They had no more trouble with her afterwards, but furnished her with a little opium occasionally, in diminished doses, and in the course of time, I believe, succeeded in breaking up her bad habit.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

Lecture on Cerebral Symptoms independent of Cerebral disease. Delivered at the Hospital for Sick Children. By Charles West, M. D.

Gentlemen:—Of all the inquiries which, in private practice, the parents of a sick child will put to you, there is none that will be made so often or so eagerly as this: "Do you think his brain is affected?" The answer which you give to this question will at once convey a sense of unspeakable relief, or will produce a feeling of blank hopelessness; either, perhaps, excessive, but either most natural. Without doubt, the importance of a correct reply is very great, for your prognosis and your line of treatment are dependent on it, and an error, even though corrected in twenty-four hours, may be irreparable. I think, then, that the time will not be miss-spent which we devote to-day to an examination of the dfferent circumstances wherein we are most likely to meet with the symptoms of cerebral disorder, independent of real cerebral disease. Now you may encounter such symptoms in two different conditions; either in the course of acute affections simulating active disease of the brain, or in the course of chronic ailments, where there may seem to be reason for apprehending the advance of slow disorganization; and each class of cases demands a seperate consideration.

Before examining either class of cases in detail, I would, however, remind you that in the child, as in the adult, the brain is disturbed more or less in the course of every acute affection of the general system; and further, that, in proportion to the youth of the child, there will be an apparent sameness in the characters of such dis-

turbance, and a consequently increased difficulty in determining the cause whereon it depends. Thus, for instance, whether one of the exanthemata is about to come on, or influenza, or inflammation of the lungs; or whether the illness is a mere febrile attack conseqent on dentition, there will in all these circumstances alike be a hot skin, and a frequent pulse, a loss of cheerfulness, a heavy head, a disposition to drowsiness, and yet a state of unrest; symptoms, in short, which are just the same with those that, in the infant, would attend the early stage of actual disease of the brain.

But, while I refer to this fact as one never to be lost sight of in the endeavor to discover the true import of the cerebral disturbance which accompanies almost every form of acute illness in early life, my special object to-day is to point out to you some of the circumstances wherein, in infancy or early childhood, a correct diagnosis is peculiarly difficult.

I propose to notice, very briefly—

1st. The cerebral symptoms that usher in the attack, or accompany the early stages of fevers.

2d. Those which, at the onset of acute inflammations of the thoracic viscera, sometimes throw the evidences of the real disease into the shade; and

3d. Those dependent on some disorder of the abdominal viscera, which, though not always itself of an acute character, yet gives rise to sudden disturbance of the nervous system, and to symptoms that simulate active cerebral disease. Such are sometimes the consequences of unsuitable food, of diarrhœa, of colic, and of intestinal worms.

Afterwards, if time allow, I purpose

4th. To make a few observations on the more chronic ailments in which cerebral symptoms are likely to be observed; and their import is apt to be misapprehended.

Now, with reference to cases of the *first* class—namely, to those in which cerebral symptoms usher in the attack, or accompany the early stage of fevers—I may observe, and the remark holds good in other cases also, that in proportion to the suddenness of the onset, and the violence of the character of such symptoms, is the probability of their depending on real disease of the brain so much the smaller. A severe attack of convulsions is rarely an early symptom —is almost never the first symptom—of real acute disease of the brain. Its occurrence, therefore, always raises a presumption that its cause is to be sought in some source of irritation external to that organ; that, how much soever the immediate urgency of the case may require remedies addressed to the brain, the ultimate dangers of the disease will be found to depend on some other cause, to arise from mischief seated elsewhere than in that part which at first seemed to be the most suffering.

The early stage of the eruptive fevers sometimes affords a very remarkable illustration of the amount of disorder of the nervous system, which may precede or accompany the full outbreak of the rash. During the first day of the eruption of measles, for instance

one or two attacks of convulsion sometimes occurs, though they usually pass away without being followed by protracted coma, or by any other abiding signs of cerebral disorder. In these cases, the previous existence of the morbillous cattarrh, often even the presence of faintly-marked stigmata of the rash, the general heat of skin more intense upon the trunk than even about the head, will usually preserve from error, and you may speak with confidence as to the probably speedy disappearance of the cerebral symptoms. Far more serious, however, are the signs of cerebral disturbance by which smallpox and scarlatina are occasionally ushered in; the transition from apparent health to violent convulsions being sudden, and apparently causeless, the fits themselves most formidable, and the coma by which they are succeeded very profound. Such was the case of a little girl, two years old, who, until the day before that on which I saw her, had never had an hour's illness. She had eaten a hearty dinner, and, though she vomited soon afterwards, did not seem otherwise indisposed, and slept well in the night. Immediately on waking in the morning, however, she had a fit, during which she was insensible, much convulsed; and insensibility, with occasional convulsions, and great heat of skin, continued for the ensuing twenty-four hours. Depletion, both general and local, the latter twice repeated, was followed, at the end of twelve hours more by considerable diminution of the convulsive movements; and, forty hours after the first fit, the child fell asleep, and dozed quietly for a few hours. She awoke sensible, and continued so. On my visit in the morning, I found her quiet and sensible, without any sign of convulsion; her face was very pale; her head, before so hot, was now quite cool; her pulse had sunk in frequency, and had lost its fulness. An eruption of a papular character had appeared on the hands, arms, inside of the thighs, and slightly on the face. This eruption was the smallpox, and the disease ran its course without an unfavorable symptom.

The comparative rarity of smallpox may be some excuse for my not having been prepared for the possibility of the convulsions depending in this case on the cause to which they were really due; but it is well to bear in mind that in every instance where cerebral symptoms come on without obvious reason, in early life, inquiry should be made as to the date of previous vaccination, and the arm should be examined for its evidence in the cicatrices left by its performance. A similarly stormy onset, however, is sometimes observed in cases of scarlet fever; and then it usually preludes an attack of a malignant kind, characterized by speedy loss of power, and tending to an early death. This occurrence, indeed, never very common, is most rare when scarlet fever is merely sporadic, but in epidemics of the disease it happens more frequently, and this even although the general characters of the disease are of a mild—not at all of a malignant—type.

"In the autumn of 1831, and during the early part of 1832," says Dr. Von Ammon, "scarlatina prevailed epidemically at Dresden. The cases which at first presented themselves to my notice,

were, for the most part, mild in character, and ran a favourable course; but, at the same time, I met with some instances where death took place very rapidly, and under peculiar symptoms of cerebral disturbance, in children who neither, during life or after death, showed the slightest trace of scarlatinoid eruption. At first I felt in doubt as to the cause and nature of the rapidly-fatal head affections; for I did not anyhow connect them with scarlet fever, while the disease differed from inflammation of the brain in the extreme rapidity of its onset, in the fact that, notwithstanding the intensity of the headache, it was unaccompanied either by nausea or vomiting, that the bowels were not constipated, and that the pulse beat with such frequency that it was almost impossible to count it, while the attitude of the patient was not at all such as is usually assumed by any one suffering from acute cerebral inflammation."

Dr. Von Ammon then goes on to say how a post-mortem examination of one of these cases led him to the suspicion, which afterwards became a certainty in his mind, that these were really instances of scarlatina; that the impression of the poisoned blood upon the brain and spinal cord destroyed life before time had elapsed sufficient to allow of the ordinary manifestations of the disease. The possibility that the clue to the understanding of symptoms of formidable cerebral disorder is to be found in the approach of one of the eruptive fevers, enforces the necessity, for learning in every case the history of a child's previous ailments, and renders it even more imperatively your duty to do so at a time when scarlatina is epidemically prevalent. Rapid, too, as is sometimes the advance of inflammation of the brain, its progress is commonly far slower than that of the cerebral symptoms which accompany the onset of the fever, while almost invariably some characteristic or other of the mere local inflammation would be absent, some anomaly would show itself, such as excited the suspicion of the German physician, and ought to awaken yours.

But besides the instances just referred to, in which the temporary violence of the cerebral symptoms suggests the idea that active inflammation of the brain is present, there are others of less rarity, where, though the feeling of anxiety as to the real nature of the disease is less urgent, it is yet of longer duration. Such are the cases in which, during the early stage of typhoid fever, the symptoms of cerebral disturbance so preponderate that for some days a doubt may be entertained as to whether the fever is sympathetic with disease of the brain, or the brain is disordered as a consequence of the fever. The question, in short, is between tubercular hydrocephalus and typhoid fever. Now, something may be gathered from the age of the child, at least towards raising a presumption one way or the other, for the older the child is, the more likely is the disorder to be typhoid fever; the younger it is, the more likely to be hydrocephalus; and I strongly recommend you, in doubtful cases, to put the issue between these two definite diseases, and not to indulge your indolence and put to sleep doubts which

you feel unable to solve, by talking to yourself or to your patient's friends of gastric fever, worm fever, and so on—terms to which no definite import is attached either by yourselves or by others. There is not time to pass in review minutely all the diagnostic symptoms which mark typhoid fever, and serve, in spite even of much cerebral disturbance, to distinguish it from hydrocephalus. It may, however, suffice to remind you that vomiting is generally absent, is never obstinate, nor succeeded by long continued nausea ; that the bowels are often relaxed, never obstinately constipated, and that the evacuations are light-colored, fecal, but usually watery. Further, the abdomen is full, usually tender, and flatus is always to be felt in the intestines ; the tongue is not often much coated, it is red at the tip and edges, and early shows a tendency to become dry. The skin is very hot, the heat is pungent, the pulse is frequent, and continues so throughout, but is never irregular nor intermittent. Even the very cerebral symptoms have their characteristic features ; for the early occurrence of delirium, which is so general in typhoid fever, is another point wherein it differs from hydrocephalus, in which much pain of the head, much drowsiness, a marked change of temper and disposition, yet coexist with a perfect intelligence.

"Surely," you may say, "these differences are marked enough ; to dwell on them is superfluous, nay, wearisome ; the help we want is in real diagnostic difficulties, not in cases so obvious, whose right interpretation is so easy."

Believe me gentlemen, nine-tenths of the errors of diagnosis are made in easy cases ; in cases whose features are sufficiently marked for recognition, if the observation had been trained to notice them, or the mind been disciplined to the inquiry in every instance : Why do I believe the disease to be this, why not that, or the other? The power of intuition and the habit of guessing are two very different things, though sometimes mistaken for each other. The former is now and then the reward of years of patient observation ; humility and dilligence are its parents. The latter is engendered between indolence and self-conceit ; he who takes up with it, whatever be his abilities, forfeits all chance of ever attaining the other ; he adds not to his knowledge from being right, he gathers no lesson from being wrong ; for him "experience yields no fruit, age brings to him no wisdom."

There is a second class of cases in which the predominance of symptoms of cerebral disturbance sometimes masks the real nature of the disease, and such cases are met with among the acute inflammations of the thoracic viscera. Risk of being led astray would indeed be almost entirely avoided, if yon made it an invariable rule, in all the acute ailments of early life to regard your examination as incomplete until after you had made a careful auscultation. The symptoms of disturbance of respiration are indeed often too marked to be overlooked ; the cough, the pain in the chest, and the hurried breathing render mistake impossible ; but it now and then happens at the commencement of pleurisy, and in pneumonia, especially of the upper lobes, that the nervous system sympathizes so deeply as

to draw away the attention from those symptoms which, though obvious enough to him who seeks for them, do not stand out so prominently as to attract the first hasty glance. Pneumonia and pleurisy, especially the latter, occasionally set in with a convulsion; but you will, I trust, remember the caution which I have already given as to the sudden violence of cerebral symptoms indicating that the brain is disturbed by some eccentric cause, rather than by mischief seated in that organ itself. Pleurisy, more particularly when affecting the right side, is sometimes ushered in by vomiting, and this vomiting seems all the more suspicious if it has just preceded or just followed an attack of convulsions. It is accompanied by fever and by intense headache; the child cries aloud or screams much in its sleep, and if it is old enough for the symptom to be observed, delirium is not unlikely to be present. The cough may be but slight, or altogether absent, and even the pain not considerable, and it is then quite possible that the disturbed breathing may be put down to that sympathetic disorder of respiration to which the name of "cerebral breathing" has been applied. Need I say that it is much harder to correct a diagnostic error into which one has fallen, than, by care, to avoid it in the first instance? If the case is one of pneumonia affecting the upper lobes, severe headache, drowsiness, great heat of head, though found, if carefully observed, not to be greater than of the surface elsewhere, all serve to mislead. Delirium, too, is very often present, if the child is old enough for that symptom to manifest itself; and the mind of the attendant fluctuates in such cases between the ideas of cerebral congestion, of hydrocephalus, and of typhoid fever; one impression preponderating at one part of the day, another at a different one; but the true view of the case not presenting itself to the mind at all. In the case of pleurisy, even though the mistake is discovered late, the child will probably survive, and the distended side, the adaptation of posture, the subsidence of the fever, and the disappearance of the head symptoms are tolerably sure to put the doctor, though tardily, on the right track. In pneumonia, the error is even more serious, for the disease is more formidable, and the longer continuance of cerebral disturbance is likely to keep up the mistake. In its later stages, the convulsion and the coma which sometimes come on as the results of the imperfect depuration of the blood, perpetuate the misapprehension, which, perhaps, a post-mortem examination alone brings to light.

Now, without going into minute detail, for which there is no leisure, I may observe that in these cases you will find something always wanting of those symptoms which characterize real cerebral disease. Perhaps there has been a convulsion; but it was not followed by coma, nor by paralysis of either side. Vomiting has occurred, but it has soon subsided. The head is hot, but yet not hotter than the rest of the surface, and it is unaccompanied by violent pulsation of the carotids. The light may be unpleasant, but it is not shunned with that intense sensitiveness to its presence which closes the eyelids even in the darkened chamber. Again, though

the breathing is sometimes hurried in cases of cerebral disease, yet here the hurry is constant; if the case is one of pneumonia, it is extreme, and between the hurried breathing and the rapid pulse a constant proportion is observed, while, though the cough may be but slight, some cough is almost surely present. Such, and such like, are the criterions by which, if you test the symptoms in these doubtful cases, you will run but small risk of not coming to a right conclusion.

Nearly forty years ago, a French physician wrote an essay, the object of which was to illustrate what he termed the predominance of the digestive organs over the brain in childhood, and he appended to it the details of forty-eight cases in corroboration of his opinions. Now, although like all other books written to develop one idea, this is somewhat one-sided in its views, and, perhaps, a little overcharged in its statements, yet the main point is correct—namely, that

The *third* class of cases, in which symptoms of cerebral disease are provoked by disorders of the digestive organs, is very numerous and very important.

A slight acquaintance, even, with the practice of medicine will have familiarized you with various symptoms of disturbance of the nervous system which derangements of the digestive organs and their appendages bring with them. Such are the unquiet sleep, the night-terrors, the grinding of the teeth, the sleeping with half-closed eyelids, the thumbs drawn more or less into the palm, which one often observes in infancy and early childhood, and some of which are seldom altogether absent during dentition, or when changes are first made in the diet of infants. But there are, besides, two distinct classes of symptoms to which disorders of the digestive organs, when severe, may give occasion—namely, convulsions on the one hand, and, on the other, that form of cerebral disturbance characterized by mingled exhaustion and irritation, to which the name of the hydrocephaloid disease, or spurious hydrocephalus, has been given.

Convulsions from this cause are generally the result of unsuitable food, or of an over-full meal in infancy or early childhood; though other sources of irritation, as that of worms, or even of a calculus in the kidney, may produce them. Those which depend on indigestible food, are sometimes so severe as to threaten life, or even actually to destroy it. They nearly proved fatal in the case of a little boy, five years old, previously healthy, who, on July 9, 1846, dined off some boiled salmon, of which the rest of the family partook more heartily than he without any ill effects. At ten o'clock on the following morning, having slept well during the night, he was suddenly seized by a violent convulsion, in which his whole surface became exceedingly livid, and his lips of a deep purple hue. His respiration was greatly affected, he seemed as if he could not get air enough into his chest to keep him alive, and he appeared every moment as if he would be suffocated; while his pulse was feeble and frequent, and the temperature of his body low. Under the influence of the

cold douche to his head, his breathing became less laborious, his lips regained much of their natural florid color, the convulsions greatly diminished, and the child began to make some half-conscious movements. It was now possible to give him an emetic, which caused free vomiting twice, and the rejection of some of the undigested salmon. The child was next placed in a hot mustard bath; while in it, the convulsions completely ceased, after having lasted three hours and a half. He was now put in bed, where he slept quietly for four hours, and awoke quite well.

Now, that which took place here you may observe not very rarely, and with symptoms of equal severity, in early infancy, when, perhaps, the error in diet has been so trivial that you can scarcely realize the possibility of its producing such formidable results. The fact, however, that in any given instance, the convulsions depend on such a cause, may usually be gathered partly from the history—which, in early life, is all the more important from the patient's inability to speak for himself—but still more from our observation of their characters. They are apt to be violent, accompanied with much spasm of the extremities, clenched hands, or the thumb drawn forcibly into the palm, and the great toe widely separated from the other toes. They are associated with spasm of the larynx, which often remains closed till suffocation seems impending, and with much trouble of the respiratory movements; in other words, with evidence of all the spinal system of nerves being in a state of great irritation. Almost always, too, the abdomen in such cases is distended, often extremely tympanitic, and there is frequent escape of flatus from the intestines. These peculiarities, if borne in mind, will often give you a clue to the meaning of a violent and apparently causeless convulsive attack. They indicate the source of the disturbance to be eccentric, and thus both guide your treatment and influence your prognosis, enabling you to hold out the hope that, if the child do but surmount its present danger, recovery will be complete as well as speedy.

I referred to a second class of symptoms dependent on disorder of the digestive organs; symptoms less formidable in appearance, perhaps, but more delusive, by which irritation and exhaustion together simulate the effects of inflammatory disease of the brain. It is in diarrhœa, and especially in relapses of diarrhœa, that these two conditions are associated in the greatest degree, and that the risk of error is, perhaps, most considerable.

One case in illustration of it must suffice, for time draws short.

A little girl was seized with diarrhœa on August 8, which at first was severe, but soon yielded to treatment, and she was again convalescent; when, on the 15th, vomiting and purging returned with great violence, and were attended with much febrile disturbance. On the following day, she was still worse in all respects, but was not brought to me again until the 17th She then looked exceedingly ill; her face was sallow, but with a flush on each cheek, and her eyes were deeply sunk. She lay in a half-dozing state, with her eyelids half closed, and the eyeballs turned upwards, so that nothing

but the sclerotica was visible; but from this condition she awoke frequently and suddenly, in a state of great alarm, and looking as if she were about to have a fit of convulsions. Her skin was hot, and very dry; her pulse very frequent, but not strong; and there was some subsultus of the tendons of the wrist. The abdomen was rather tympanitic; the tongue red, coated with white mucus; the thirst great; the vomiting very frequent, and the bowels acted two or three times in an hour, the evacuations having the appearance of dirty water.

The persistence of the diarrhœa, and the great frequency of the action of the bowels, coupled with the fact that I had observed the case from the commencement, would have rendered error inexcusable. But such cases may come under our notice only when the evidence of cerebral disturbance is already very striking, and when, perhaps, the diarrhœa is no longer very urgent—perhaps may for a few hours have altogether ceased—in such circumstances, error is very possible, and its consequences may be very disastrous. If you regard the cerebral symptoms as the signs of active disease, and withhold the Dover's powder or the opiate enema, that might have checked the diarrhœa and soothed the irritability, while you apply cold lotions to the head, and give the child nothing more nutritious than barley-water in small quantities, because the irritability of the stomach, which results from weakness, seems to you the indication of disease of the brain—the restlessness will before long alternate with coma, and the child will die either comatose or in convulsions.

This is not, indeed, the only form which this spurious hydrocephalus assumes, although it is that in which the signs of irritation so mask those of exhaustion as to render the risk of mistake most serious; while the time during which the error can be rectified is in these cases very brief. In a larger number of instances, this condition comes on much more slowly, since it results from the gradual influence of imperfect nutrition; and in these circumstances the signs of irritation of the nervous system which characterize its early stages are less marked, though not, on that account, less deceptive. In the infant brought up by hand, or imperfectly nourished at the breast, the first stage sometimes continues for weeks, attracting, perhaps, little notice; giving rise, indeed, to a vague suspicion that something is wrong, but yet this suspicion so indefinite that neither the parent nor the doctor pushes the inquiry far enough to decide what that something is; or, possibly, commencing dentition bears the blame of the whole set of symptoms. I would have you, too, bear in mind that, in these cases, dentition may really have much to do with the production of the symptoms, though not exactly in the way which at first suggests itself. The insufficient or unsuitable food heightens the irritability of the nervous system, and renders it preternaturally sensitive to the disturbance which teething seldom fails to bring with it. This disturbance acts, though more slowly, just as does that which accompanies diarrhœa; it exhausts the nervous power by all the manifestations of reaction which it produces, as the continued

galvanic current wears out for a time the contractility of the muscles. The symptoms do not betoken real disease of the brain, though they closely resemble those which it occasions; so closely, indeed, that to read their import aright, you sometimes need go back for weeks, or even months, to gather the child's early history, and to learn how it has been fed, and how it has thriven from its birth. You will find, too, both in the past and in the present, intermingled with the general signs of cerebral disturbance, the evidences also of spinal irritation such as I have already referred to; and they should always lead you to suspect that the brain is disturbed in sympathy with some cause external to it. Irritability, restlessness, feverishness, a flushed face, a frequent pulse, undue sensitiveness of the surface, moaning, starting in sleep, all point to disorder of the nervous system, but they do not specially point to disease of the brain; their real meaning must be gathered from a consideration of the whole condition of the patient. That condition will be found to vary very much; the face will not be always flushed, nor the head always hot, nor the fontanelle always tense or pulsating. Vomiting may occur, but it will be occasional; the bowels will be relaxed rather than constipated; the abdomen not shrunken, but distended with flatus; a state which should always turn your attention from the brain itself to some source of irritation external to it; since, as the distinguished German physician, Goelis, has remarked, a collapsed state of the abdomen, and the absence of flatus from the intestines, are signs almost pathognomonic of hydrocephalus. Often, too, the carpopedal contractions and the laryngeal spasm are present, or have existed, to warn you as to the real nature of the case; while the pulse, though feeble and frequent, retains its regularity of force and rythm, and thus differs remarkably from the irregular, intermittent, or unequal beats, which are among the earliest and least fallacious signs of real cerebral disease. If misinterpreted, and, consequently, wrongly treated, the stage of exhaustion comes on by degrees, and with it a stealthy stupor. The flush no more returns to the surface, the extremities grow cold, the pulse becomes feebler, the pupils permanently dilated, the respiration sighing, the voice husky, deglutition difficult; symptoms which, if the earlier stage was misinterpreted, will probably be regarded as the signs of the last stage of hydrocephalus; though the depressed fontanelle, the cool head, the pulse still frequent in spite of its feebleness, the abdomen still containing flatus, the bowels still loose, will tell at once a different tale to some other practitioner, who, with no larger experience than your own, yet with a mind unbiased by a foregone conclusion, comes to the case, and at once reads its meaning aright.

I had wished to have said something about cases of a chronic character, in which symptoms occur that give rise to unfounded suspicion of diseases of the brain, but there is to-day no time to do more than enumerate some of them. Such are the groundless suspicions which parents often entertain, and which the doctor himself is not always as quick as he might be to negative, in cases of essential

paralysis in infancy and childhood. Such are the fears excited by the temporary though often long continued dulling of the faculties, which often follows fever or some exhausting illness. Such are the apprehensions which fits of waywardness or altered temper excite: such, too, on the other hand, is the dread which the excitability of a child, whose faculties are just awakening to the wonders of the world around him, sometimes occasions his relatives; and such, lastly, is the morbid anxiety with which the severe neuralgic headache of childhood is watched by persons who can scarcely be persuaded but that suffering so intense, and the return of which medical care so often fails to prevent, must needs depend on a cause as serious as it obviously is difficult of removal.

You see, gentlemen, my catalogue is a long one, and, I think, not unimportant. I must hope, at some future time, to pass it in review, as I have to-day tried to do with the other class of cases of a more acute kind. Some of the details may, I fear, have seemed tedious; but my excuse is, that the errors against which I have tried to warn you, are the same as, in past years, I have myself committed. I have not stated imaginary dangers. I have tried to warn you against such as have proved themselves, to me, very real ones, and to make you, to the best of my powers, the inheritors of my own experience.—*Med. Times and Gazette, Dec.* 24, 1859.

Hypnotism—A new Anæsthetic.

Paris, December 16, 1859.

Three winters ago, table-turning and tipping were the great source of amusement and investigation in the gay, as well as the scientific world of Paris. That immense humbug having, however, been pretty well used up, Paris has now got hold of something else, which, uniting the scientific with the amusing, and gratifying curiosity and the love of the marvellous, promises to become as popular as the turning table did, and, there is reason to believe, will be attended with more important and beneficial results.

The medical faculty of Paris are now earnestly engaged in experimenting upon a new method of anæsthesia, which promises, to a certain extent, to do away with the use of chloroform in surgical operations; and as the system has been introduced, and the experiments are now being made by regular physicians and surgeons in high standing, the statements of the results are not only of interest, but entitled to great respect. The new mode of producing sleep and insensibility consists in placing a small, brilliant object before the eyes of the person upon whom the experiment is to be made, a few inches above the root of the nose, so that the patient cannot regard it without squinting. The eyes being fixed upon this object, the pupils immediately commence contracting, but soon after dilate, and in from one to five minutes a state of catalepsy is produced, so that the

limbs of the patient, being raised or bent in any position, remain fixed as they are placed. This, however, is only the most unimportant portion of the phenomena produced. Insensibility to pain ensues, during which surgical operations may be performed without the knowledge of the patient and without the exhibition of as much sign of sensation as is usually exhibited under the influence of chloroform. Doctor Azam, of Bordeaux, and M. Broca, of Paris, were the first to call the attention of the faculty to these extraordinary facts. The celebrated surgeon Velpeau communicated them to the Surgical Society, and recommended that experiments should be made, as they have been, by M. Velpeau, M. Follin, Verneuil, Faure, Trosseau, Denonviliers, Nelaton, Azam, Robin, and other surgeons in the various hospitals of Paris. Hypnotism is the great subject of the day, and having witnessed the experiments referred to below, at the Hospital Neckar and the Hotel Dieu, I can vouch for the perfect accuracy of their description.

The following description of the cases already experimented upon, I translate from the *Gazette des Hopitaux.* The first case mentioned is communicated by M. Broca to the Surgical Society. The first subject, says the *Gazette*, was a woman twenty-four years of age, who had a large burn on her back and lower limbs, with a large and very painful abscess. Exhausted by pain, and besides very obstinate, this woman dreaded very much the opening of the abscess. She was told that she was to be put to sleep. A little copper cylinder was placed at a distance of fifteen centimetres (between five and six inches) in front of the root of the nose. The patient, in order to fix her eyes upon this object, was obliged to squint strongly, and the pupils were soon powerfully contracted. The pulse, already rapid, was at first slightly accelerated, but immediately afterward became much more feeble and much slower. At the end of two minutes the pupils commenced to dilate, and the left arm, raised almost perpendicularly above the bed, remained fixed in that position. In less than four minutes the responses were slow and almost painful, but perfectly sensible. The respiration was short and quick. At the end of five minutes, M. Follin pricked the skin of the left arm, which was still remaining in a vertical position. Another puncture which drew blood was unnoticed by the patient. The right arm was placed in the same position as the other, and the abscess was uncovered, the patient making no resistance, but saying very tranquilly that they were going to hurt her. At the end of seven minutes from the commencement of the experiment, M. Follin opened the abscess. A low cry, which continued less than a second, was the only sign of reaction which the patient gave. There was not the slightest quivering in the muscles of the face or the limbs, and the two arms remained as they were, without the least displacement, and retained their position for several minutes afterward. Two minutes after, the position was still the same; the eyes were widely open and slightly moistened, the face was motionless, the pulse as before the experiment, the respiration perfectly free, the patient remaining insensible. The left heel was raised, and remained

suspended in the air, and the cataleptic condition of the limbs continued.

M. Broca now took away the copper cylinder, which all this time had been kept before the eyes of the patient. He then gently rubbed the eyelids and blew upon them, upon which the patient moved slightly, and was asked if anything had been done to her, to which she replied, that she knew of nothing. Up to this time the three limbs remained in the attitude which had been given them. Another puncture was made upon the left arm, which the patient did not perceive

Eighteen minutes after the commencement of the experiment, and twelve minutes after the operation was completed, the eyelids were rubbed and blown upon again, upon which the patient awakened almost instantly, and the rigid limbs fell at once. The patient rubbed her eyes and became perfectly sensible. She remembered nothing which had occurred, and was astonished to hear that she had been operated upon. Her condition up to a certain point was comparable to that of persons coming out of an ordinary anæsthetic sleep ; but the waking was much more prompt, and without agitation or loquacity. The anæsthesia had continued at least twelve or fifteen minutes.

The same patient was placed a second time in a hypnotic condition, which was reached more rapidly than before. At the end of two minutes the arms were placed in a cataleptic state, and the patient did not feel the puncture of pins which were made in the right arm. The waking, which was spontaneous, was prompt, and no new features were manifested.

Another patient, Annie F———, aged 19 years, operated upon for a lachrymal tumor, now nearly cured, was put four times under the influence of hypnotism. This was the first woman upon whom Messrs. Broca and Follin had studied the effects of this curious phenomenon. In the four experiments the results were the same. A spatula was placed about five inches before and above the eyes.

At the end of one or two minutes there was a cataleptic condition of the limbs, sleep with snoring, and a complete insensibility to the pricking of pins and pinching of the skin. A feather introduced into the nostril awakened no sign of sensibility. This patient was awakened by slight frictions and blowing of cold air on her eyes. In the last experiment with this patient, at the moment when the sleep commenced, M. Follin softly closed the eyes, removed the object upon which they had been fixed, and the phenomena of catalepsy and insensibility still continued some minutes. During her sleep the patient had but a very confused idea of what was passing around her. She thought she felt the surgeon touching her, but had experienced no pain.

Two attempts at hypnotism were made by Messrs. Azam and Follin upon a young girl of eighteen years, who had a sore foot. The results were not so satisfactory as in the preceding cases, but each time the patient experienced a noticeable slackening of the pulse, a slight cataleptic condition and partial insensibility.

Two other experiments, followed by very positive results, were made on the 8th of December by Dr. Azam. With the first young woman the catalepsy commenced at the end of a minute and a-half, and at the end of two or three minutes the catalepsy and insensibility were complete. The woman was insensible to the pinchings and punctures, and was seated on a chair, her arms raised, the fingers spread apart, the left leg was raised from the floor—in fact in a very tiresome position. At the end of five minutes she was awakened.

Upon another woman the insensibility was complete at the end of two minutes; but instead of the cataleptic condition being produced, there was a muscular weakness which made it necessary to support the patient. M. Azam gently lowered the eyelids and removed the spatula which was before her eyes. The patient remained insensible during several minutes, and could probably have been kept longer in that condition. She was equally with the others insensible to the prickings, pinchings and ticklings of the nostrils, and the soles of the feet, and upon waking she had no knowledge of what had taken place.

On the 7th of December, Dr. Azam, having informed M. Trousseau (one of the most celebrated of the Parisian medical professors) of some of the preceding facts, made an experiment at his request. The subject was a young woman who, for a long time, had been under treatment for epileptic fits, and who had no previous information of what was to take place. M. Azam requested the girl to gaze directly upon a pair of scissors, which he held at a distance of ten inches from her eyes. At the end of a minute and a-half M. Azam raised one arm, which remained in the position in which he placed it. M. Trosseau then raised the other, which also remained horizontally extended. The soles of her feet were tickled, she was severely pinched, and pins run into various parts of her body and still the insensibility continued, and after three minutes M. Azam awakened the patient by blowing upon her eyelids. She at first made severe, long inspirations, stretched her limbs and complained of great weariness and fatigue. She then remained for some time in a state of stupor, which continued longer than it usually did after the attacks of epilepsy.

The following morning M. Trosseau himself renewed the experiments, and having placed a brilliant object before the eyes of the girl, at the end of a minute the same phenomena occurred. He remarked that the sleep was produced even more rapidly, and this has appeared in several cases, proving that the oftener the experiments are repeated, the more rapidly is sleep produced.

The facts in relation to the hypnotic phenomena are fully established by these experiments, and I have seen M. Velpeau succeed in two experiments at the Hospital de la Charité, and have also seen several failures. It is not probable that the new agent can be profitably used excepting in comparatively few cases; but it is impossible to foresee what will be the results of the experiments now in progress.

The discovery, it seems, is not a new one, having been made some

eighteen years since by a Scotch surgeon named Braid, who wrote a book upon the subject, entitled "Neuryprology, or the Rationale of Nervous Sleep, Considered in Relation to Animal Magnetism," but the subject, it seems, became "hypnotised," and has only been awakened in these latter days by Messrs. Azam and Broca, with the results which I have given above. There is no doubt, I suppose, but the new agent will be considerably experimented with upon your side of the water.

Substitute for Anæsthesia.

The Boston Traveller publishes the following:

RUE DE LA CHASSEAU D'ANTIN, *Paris*, Monday, Dec. 12, 1859.

I can not let this steamship leave here and not acquaint you with one of the most extraordinary discoveries recently made. Monsieur Velpeau, the eminent surgeon, whose fame is as wide as the world, made the strange communication. He stated that an honorable surgeon or physician (he vouched for the gentleman's character,) named Broca or Rocca, had made the following experiment: He had placed before the face of a person, between the person's eyes, and at a distance of fifteen or twenty *centimetres* (a *centimetre* is a French measure of length—0.393,708 inch in value) a rather brilliant object (*un objet un peu brilliant.*) Make the person look fixedly at this object. In a few minutes the person will squint, and will soon fall into catalepsy and be spontaneously deprived of all sensibility.

In the experiments made, the insensibility of the patient was so great that the patient's head was alternately moved from one side to the other, and his whole person was moved. He had no recollection of any of them when he returned to his normal state.

This singular discovery made Mons. Rocca or Broca suspect that this state of insensibility might be as perfect as that obtained by anæsthetic agents. He determined to make experiments with it, and found that the state of insensibility produced, was as perfect as that obtained by the use of ether and chloroform.

Three experiments out of five attempts are reported as successful. In one of these cases a man underwent a surgical operation for an abscess, which required an important incision. The insensibility lasted ten or fifteen minutes after the operation. The patient was entirely unconscious of all that had taken place.

The experiments mentioned by Mons. Velpeau may be easily repeated by anybody. Their importance in point of economy and money and life is serious. Chloroform and ether are both costly articles, and their use is attended with danger. They have destroyed more than one life, and medical men are still unable to vaticinate in what states of the body they may be used innocuously, and when they will extinguish life. Besides, their use in the lesser surgical operations, such as the extraction of teeth, is generally considered, out of the city of Boston, to be eminently injudicious.

What a blessing this new discovery will prove, if time and experiment avouch all its present advantages.

Mons. Velpeau, in announcing the new discovery, said: "It is a strange phenomenon, so strange a phenomenon that I feel obliged to take some oratorical precautions in speaking of it to the Academy of Sciences. I feel obliged to draw assurance from the talents and honorable character of Mons. Broca, who has charged me with the duty of giving his discovery useful publicity, and at the same time of assuring his right to the discovery of this remarkable phenomenon."

Mons. Velpeau, therefore, does not present the new system of anæsthesia for a panacea, but he says to medical men: "Use it, study it, experiment on it on useful occasions, and perhaps you may contribute to endow science with a new means of alleviating suffering humanity.

SPIRIDION.

Acupressure: A New Method of Arresting Surgical Hemorrhage. By Dr. SIMPSON, of Edinburgh.

At the first winter meeting of the Royal Society of Edinburgh, held on Monday, the 19th December, 1859, Professor Simpson made a lengthened communication on Acupressure, as a new mode of arresting surgical hemorrhage. After describing the various methods of staunching hemorrhage in surgical wounds and operations, which the Greek, Roman, Arabic and Mediæval surgeons employed, he gave a short history of the introduction of the ligature of arteries, and spoke of it as—with the occasional exception of torsion for the smallest arteries—the hæmostatic means almost universally employed in chirurgical practice at the present day. But he thought that surgery must advance forward a step further than the ligature of arteries, particularly if surgeons expected—as seemed to be their unanimous desire—to close their operative wounds by the immediate union or primary adhesion of their sides or walls.

To enforce this point, Dr. Simpson recapitulated the arguments which he has already adduced on the same topic in this journal, (See *Edinburgh Medical Journal* for December, 1858, p. 547,) urging, that since we now know that in obstetric surgery we can, with metallic sutures, produce with great frequency and certainty, complete union by the first intention of the vivified lips of a vesico-vaginal fistula, (and that, too, in despite of urine, the most irritating fluid in the body, constantly bathing one side of the wound), surgeons ought to heal *their* common surgical wounds by primary adhesion also, provided there were no counteracting circumstances to prevent this desirable result, yet the complete and entire union by the first intention of surgical wounds, left by the removal of a limb, mamma, tumor, etc., was confessedly not very frequently seen in

surgical practice. The *ligatures*, by their presence around the cut arteries of the wound, formed the counteracting circumstances or agents, which prevented the primary union of the sides of the wound. They produced this effect in two ways: First, they acted themselves as foreign bodies in the depths of a wound; and when composed of silk or organic matter, they rapidly swelled with imbibed animal fluids, which soon decomposed, and thus rendered each ligature thread liable to act like an irritating seton. Secondly, they counteracted immediate union or primary inflammatory adhesion in another way, viz., they always set up in the ligatured points and ends of the tied arteries *higher* stages of inflammation than the adhesive—stages that were indeed destructive of adhesion; for every ligatured artery, at the point of deligation, has its two inner coats mechanically torn and divided by the ligature, and before it escapes from its hold on the arterial tube the ligature requires to eat through the remaining bruised and strangled coat by the processes of ulceration, of suppuration, and of gangrene. Under such circumstances, complete healing of the wound by immediate union, by primary adhesion, or by simple adhesive inflammation, is more than can be expected. Surgeons have made various efforts to overcome the two difficulties thus connected with arterial ligatures. (1) In olden times they were in the habit of including portions of the surrounding tissues in the loop of the ligature. But the process of ulceration, etc., by which each ligature cuts through the part it embraces, was thus found to be rendered unnecessarily severe and protracted. Hence arose (2) the rule of including within the ligature nothing but the arterial tube itself. After this important reform was introduced, the arterial tubes were by many surgeons tied (3) by large and sometimes flattish ligatures. These, however, cut and ulcerated through the included artery very slowly; and in practice they were betimes entirely replaced by (4) ligatures as small and slender as was compatible with due strength. To diminish the bulk of the foreign body, as ligature, in the wound, the practice was next adopted of (5) cutting off one end or limb of the ligature, after the knot was tied, others, with the vain hope that the mere loop of a silk ligature might remain buried permanently—though a foreign body—within the depths of the wound, proposed (6) that both ends of the ligature should be cut off; a practice followed with little or no success. The chances of union of wounds by the first intention have been attempted to be advanced by changing also the constituent materials of the ligature. Instead of vegetable threads of flax or hemp, (7) animal ligatures of cat-gut, silk-gut, buckskin, fibres of the sinew of the deer, etc., have been employed, under the expectation that they would prove less irritating to the wound, as approaching more nearly to the living animal tissues. (8) Lastly, ligatures of metallic thread have also been placed around bleeding arteries with the same hope; and, though not irritating, as far as the material of which they are composed is concerned, yet Dr. S. had found, that metallic, like any other form of ligatures which is

placed around bleeding arteries, and left there to ulcerate through the constricted tube, usually excited, in the course of their ulcerative progress, too high irritation and inflammation to allow of union of surgical wounds by the first intention.

All the march of modern surgery has thus been in the direction of attempting to increase the chances of the union of surgical wounds by the first intention, by diminishing more and more the irritation derived from the presence and action of the ligatures supposed to be inevitably required for the arrestment of hemorrhage. By the new hæmostatic process of acupressure, Dr. Simpson hopes to overcome, in a great degree, all those difficulties; as by it he expected to arrest the hemorrhage attendant upon surgical wounds, without leaving permanently any foreign body whatever in the wound itself. It was an attempt to bring bleeding wounds, in common surgery to the condition of wounds in plastic surgery, where no arterial ligatures were used, and where union by the first intention was in consequence the rule, and not the exception to it. Sewing up the outer or external lips of a large surgical wound, by silver, iron, or other metallic or non-irritating sutures, and yet leaving within the depths of the wound a series of silk ligatures, each producing ulceration, suppuration, and gangrene at the tied arterial points, was, he argued, but an illustration of a very paradoxical state of matters—like enforcing cleanliness and the best hygienic measures, as it were, outside a house, whilst within doors there were retained and locked up filth and decomposition, and the elements of destruction and disease.

Dr. Simpson stated that he had tested with perfect success the effects of acupressure as a means of effectually closing arteries and staunching hemorrhage first upon the lower animals, and lately in two or three operations on the human subject. The instruments which he proposed should be used for the purpose, were very sharp-pointed, slender needles or pins, of passive or non-oxydizable iron, headed with wax or glass, and in other respects also like the hare-lip needles, commonly used by surgeons at the present day, but longer when circumstances required it. They might be coated with silver or zinc on the surface, if such protection were deemed requisite.

At first, Dr. Simpson believed that in using acupressure as a hæmostatic means, it would be necessary to compress the tube of the bleeding artery between two needles, one placed on either side of it. But in his later experiments upon the living as well as the dead body, (as in amputations on the latter and subsequently injecting tepid water through the arteries, in imitation of the flow of blood,) he had found that the compression of one needle was usually perfectly sufficient to shut up an artery, and that even sometimes when two or more bleeding points were near, they could be closed simultaneously by the action of one needle or pin.

The whole process consists in passing the needle *twice* through the substance of the wound, so as to compress together and close, by the middle portion of the needle, the tube of the bleeding artery a line or two, or more, on the cardiac side of the bleeding point. The only part of the needle which is left exposed on the fresh surface of

the wound is the small middle portion of it which passes over and compresses the arterial tube, and the whole needle is withdrawn on the second or third day, or as soon as the artery is supposed to be adequately closed, thus leaving *nothing* whatever in the shape of a foreign body within the wound, or in the tissues composing its sides or flaps. To produce adequate closing pressure upon any arterial tube which it is desired to constrict, the needle must be passed over it so as to compress the tube with sufficient power and force against some resisting body. Such a resisting body will be most frequently found—1st, in the cutaneous walls and component tissues of the wound; 2d, sometimes in a neighboring bone, or other resistent point against which the artery may be pinned and compressed by the acupressure needle; and, 3d, in a few rare cases it may possibly be found in practice, that a second needle may require to be introduced to serve as a point against which the desired compression is to be made. Most commonly the first of these three plans seems perfectly sufficient, and that even in amputation of the thigh, a thicker or deeper flap merely requiring a proportionally longer needle. In acting upon this mode, the surgeon may place the tip of the forefinger of his left hand upon the bleeding mouth of the artery which he intends to compress andc lose; holding the needle in his right hand, he passes it through the *cutaneous* surface of the flap, and pushes it inward till its point projects out to the extent of a few lines on the raw surface of the wound, a little to the right of, and anterior to his finger tip; he then, by the action of his right hand upon the head of the needle, turns and directs its sharp extremity so that it makes a bridge, as it were, *across* the site of the tube of the bleeding artery, immediately in front of the point of the finger, with which he is shutting up its orifice; he next, either with this same forefinger of the left hand, or with the side of the extremity of the needle itself, compresses the locality of the bleeding arterial orifice and tube, and then pushes on the needle with his right hand, so as to make it *re-enter* the surface of the wound a little to the left side of the artery; and, lastly, by pressing the needle further on in this direction, its point re-emerges through the *cutaneous* surface of the flap—the site of the tube of the bleeding artery being in this way left pinned down in a compressed state by the arc or bridge of steel that is passed over it.

The needle thus passes first from and through the skin of the flap *inward* to the raw surface of the wound, and after bridging over the site of the artery, it passes, secondly, from the raw surface of the wound *outward* again, to and through the skin. Sometimes the needle will be best passed by the aid of the eye alone, and without guiding its course by the finger tip applied to the bleeding orifice. It compresses not the arterial tube alone, but the structures also placed over and around the site of the tube. When the needle is completely adjusted, all of it that is seen, and that not necessarily so, on the surface of the raw wound, is the small portion of it passing over the site of the artery; while, externally, upon the cutaneous surface of the flap, we have remaining exposed more or less

of its two extremities—namely, its point and its head. The rest of it is hidden in the structures of the flap, or side of the wound. The degree of pressure required to close effectually the tube of an artery is certainly much less than medical practitioners generally imagine; but in the above proceeding the amount of pressure can be regulated and increased, when required, by the acuteness of the angle at which the needle is introduced and again passed out—the cutaneous and other structures of the flap serving as the resisting medium at which the needle compresses the arterial tube. If it were ever, perchance, necessary to produce greater compression than can be thus accomplished by the needle alone, this increased pressure cou'd be readily obtained by throwing around the two extremities of the needle, which are exposed cutaneously, a figure of eight ligature, as in hare-lip, with or without a small compress placed between the arc of the ligature and the skin. In practice, however, the pressure of the needle upon the artery will, without any such external aid, be found to err more frequently, at first, in the way of excess than in the way of defect.

The process of the adjustment of the needle is difficult to describe shortly by words, but the whole of it is readily seen and imitated when repeated upon a piece of cloth or soft leather. We fasten the stalk of a flower in the lapelle of our coat by a pin, passed exactly in this manner; to compress a bleeding artery against a bone is somewhat more complicated, but not much so. In accomplishing it, we have to introduce from the cutaneous surface a long needle through the flap of the wound, obliquely, to near the site of the artery, and then compressing against the bone, with the fingers of the other hand, or with the end of the needle itself, the part containing the artery, we make the needle, after passing over this compressed part, and after testing whether it has closed the vessel or not, enter into the tissues beyond, and, if necessary, even emerge from the cutaneous surface on the other side, at an angle somewhat oblique to that at which it entered; thus taking advantage of the resiliency and resistance of the soft textures, to make them push the needle with the necessary degree of force against the artery and bone. Arteries in particular parts require special adjustments and modifications to compress them against the neighboring bone, which only anatomy and experience can point out. There is always sufficient soft tissue on either side of the artery for the needle to get a purchase upon, to compress the arterial tube against the bone, or other resistent point; and a comparatively slight purchase of this kind is generally all that is required. In two cases Dr. S. had found that branch of the internal mammary artery which so frequently bleeds in the bottom of the wound after excision of the mamma, easily and perfectly closed by a needle passed through the flap to near the artery, then lifted over it and (after compressing it so as to stop the flow of blood) pushed onward into the tissues beyond. Possibly in some amputations, an acupressure needle or needles, may yet be passed, immediately before the operation, half an inch or so above

the proposed line of amputation, so as to shut the principal artery or arteries, and render the operation comparatively bloodless. If so, these needles would serve at one and the same time, the present uses of both the tourinquet and arterial ligatures. Perhaps this will be found, in some cases, as simple and effectual means of compressing and closing arterial trunks for hemorrhage and other practical purposes; as, for example. the artery leading to an aneurism—as the femoral artery in popliteal aneurism—changing the operation for that disease into a simple process of acupressure, instead of a process of delicate dissection and deligation, when in any case the milder methods of compression, manipulation, and continuous flexion of the knee fail. It has been hitherto a difficult problem to obstruct the vessels of the ovarian ligament in ovariotomy, without leaving a foreign body, whether clamp or ligature, upon the stalk of the tumor, to ulcerate and slough through it. If the stalk be transfixed, and properly and strongly pinned in its whole breadth, to the interior of the relaxed abdominal walls, by one or more acupressure needles passed through these abdominal walls from without, this difficulty may possibly be overcome.

That needles used for the purpose of acupressure, and passed freely through the walls and flaps of wounds, will not be attended by any great degree of disturbance or irritation, is rendered in the highest degree probable, by all that we know of the tolerance of living animal tissues to the contact of metallic bodies. Long ago, John Hunter pointed out that small shot, needles, pins, etc., when passed into, and embedded in the living body, seldom or never produced any inflammatory action, or none at least beyond the stage of adhesive inflammation, even when lodged for years. Sometime ago, when the subject of acupuncture specially attracted the attention of medical men, Cloquet, Pelletan, Pouillet, and others, showed that the passage and retention of long acupuncture needles was attended with little or no irritation in the implicated living tissues. The reviewer of their works and experiments in the *Edinburgh Medical Journal*, for 1827, observes: "It is a remarkable circumstance that the acupuncture needles never cause inflammation in their neighborhood. If they are rudely handled or ruffled by the clothes of the patients, they may produce a little irritation; but if they are properly secured and protected, they may be left in the body for an indefinite length of time, without causing any of the effects which usually arise on account of the presence of foreign bodies. In one of M. Cloquet's patients, they were left in the temples for eighteen days; and in cases in which needles have been swallowed, they have remained without causing inflammation for a much longer period. It appears probable, from the facts collected on the subject, that metallic bodies of every kind may remain imbedded in the animal tissues without being productive of injury." (Page 197.) All the late observations and experiments upon metallic sutures are confirmatory of the same great pathological law of the tolerance of the living tissues for the contact of metalic bodies imbedded within their substance. In the operation for hare-lip, where the whole suc-

cess or failure of the operation depends upon the establishment or not of the union by the first intention, surgeons use needles to keep the lips of the wound approximated, often compressing these needles strongly with their figure-of-eight ligatures, and find this measure the most successful means which they can adopt for accomplishing primary adhesion.

The acupressure of arteries, when compared with a ligature of them, appears, as a means of arresting hæmorrhage, to present various important advantages:

1st. Acupressure will be found more easy, simple and expeditious in its application, than the ligature.

2d. The needles in acupressure can scarcely be considered as foreign irritating bodies in the wound, and may always be entirely removed in two or three days, or as soon as the artery is considered closed; whilst the ligatures are true foreign irritating bodies, and cannot be removed till they have ulcerated through the tied vessels

3d. The ligature inevitably produces ulceration, suppuration, and gangrene at each arterial point at which it is applied; whilst the closure of arterial tubes by acupressure is not attended by any such severe and morbid consequences.

4th. The chances, therefore, of the union of wounds by the first intention should be much greater under the arrestment of surgical hæmorrhage by acupressure than by the ligature.

5th. Phlebitis, Pyæmia, etc., or in other words, traumatic or surgical fever, seem not unfrequently to be excited by the unhealthy local suppurations and limited sloughings which are liable to be set up in wounds by the presence and irritation of the ligatures.

6th. Such dangerous and fatal complications are less likely to be excited by the employment of acupressure, seeing the presence of a metallic needle has no such tendency to create local suppurations and sloughs in the wound, such as occur in the seats of arterial ligature.

And 7th. Hence, under the use of acupressure, we are entitled to expect both, *first*, that surgical wounds will heal more kindly, and close more speedily; and *secondly*, that surgical operations and injuries will be less frequently attended, than at present, by the disastrous effects and perils of surgical fever."

Lectures on Diphtherite in the College of Physicians and Surgeons of New York—By PROF. ALONZO CLARK.

Condensed from Phonographic Reports for the Medical and Surgical Reporter.

(We omit for this week the discussion of this subject in the Academy of Medicine; it was taken up at a late hour of the meeting, and no new facts were elicited. As this disease, however, from its prevalence in this city and various parts, is still attracting the atten-

tion of the profession to a great extent, we think that we can do no better than to give the substance of two lectures, delivered a few days ago, by Prof. Clark, on the disease, which, furnishing the views of that eminent pathologist in a connected and instructive form, will, undoubtedly, be as interesting to your readers, as the report of an extempore discussion.— GOTHAM.)

Having finished the consideration of croup, Dr. Clark took up diphtheria, as follows:

We now pass to a kindred affection, which at present is exciting much discussion among the physicians of this city and elsewhere; I refer to diphtheria or diphtherite. Brettonneau gave to it the name "*diphtherite,*" when his first memoir was published, many years ago, and by that name it has been known ever since. The older name seems to have been *malignant sore throat, or malignant angina, or membranous angina;* but the point most necessary for you to settle, is the one which is much discussed now-a-days, viz: Is this a new affection, or has it existed from the time we have any history of medicine? It does not seem to me, from what I have seen of it, and from what I have read of the diseases of old times, to be a new disease. It seems to have been known for a very long time. It is claimed by Brettonneau (who is the best authority we have on the subject,) that it is the disease known to the Greeks as the Egyptian disease, and that it never appeared in Greece until brought there by a colony of Egyptians. This he infers mainly from the description of what he supposes to be the same disease by a cotemporary of Galen, a Roman physician, and he maintains that this physician has described the disease in one page; he also asserts that it has been recognized from time to time all the way down to our day; that it swept through Italy and Spain, producing very great mortality in the early portion of the seventeenth century, and from that time until now it has appeared occasionally as an epidemic. The researches of such a man as Brettonneau are certainly worthy of consideration. One statement he makes, which is sufficiently curious, is, that that the Egyptian ointment, a substanse used by the Greeks for the relief of this affection, has been lost for a considerable period, and finally received in these latter times as one of the most effectual things to break up the membrane; it is made of one of the salts of copper, and he asserts that its preparation is to be found in the French codex, and other French books relating to pharmacy. We do not have it in our books. It is claimed, also, that the great epidemic which occurred in New York, and described by Dr. Samuel Bard, was this very affection. There are, I suppose, very few physicians, who have arrived at the middle period of life, who have not, at some time or other, seen this disease. But it has not fixed their attention as a *distinct form* of disease, and has been included under the general head of croup; and I suppose it is even now confounded with this latter disease. It has been known, in all probability, by various names; croup is a peculiarly favored term, and has covered a great many cases; malignant sore throat has covered a great many more. Another question arises, and that is,

is it in any way, allied to scarlet fever? Scarlet fever has a sore throat, a malignant sore throat, a membranous sore throat, which is frequently enough fatal by the formation of membrane, extending itself into the larynx and trachea. Is it not this form of scarlet fever? I had no occasion to ask that question after I had seen three or four cases of the disease. We know that persons who have had this diphtheritic inflammation, will have scarlet fever afterwards; again, children who have had scarlet fever will have diphtheria. *One* then does not protect against the *other*. Again, if it were a form of scarlet fever, we should expect to find it prevailing side by side with scarlet fever. Such is not generally the case, although, it is true, we have at this time an unusually large number of deaths from scarlet fever, while we have at the same time more of this diphtheria than I have ever seen before. It is not prevailing as a very dangerous epidemic, still there are many cases. I see, perhaps, a new case every week. Another interesting question arises. How is it communicated? Is it contagious? There is no question more difficult to answer than *that*, especially in regard to an epidemic disease, until it has been observed under a great variety of circumstances. That this diphtheria, or málignant sore throat is epidemic in its *tendency*, I think there can be no doubt; whether it is contagious or not is somewhat difficult to determine, because, where, in a certain house or family, one child shall be affected with the disease, and then a second, and then, a few days afterwards, a third, the difficulty is, that they are all subject to the *same* hygenic and dietetic regulations and conditions; they are all exposed to the same influences, which affect them all in the same manner. This is one illustration of the difficulty we meet with in attempting to ascertain whether an epidemic disease is contagious or not. In cities it is not very easy to follow contagion. In the paper of the *Sydenham Society* there is strong evidence that this disease can be communicated from person to person, and this evidence is derived from cases which have been observed in the *country*; for it does not seem to be spread by atmospheric influences. Brettonneau goes so far as to say that it can be communicated in no other way than from person to person, being in this respect similar to syphilis; and in the formation of a new nosology, this disease will have to stand side by side with the Egyptian disease, syphilis, the Neapolitan disease, etc. In this connection he relates some cases that are certainly very curious. This diphtheritic tendency is exhibited in other parts of the body than that of the throat. He relates one case in which a child, running about with bare feet, trod in the expectoration of a child sick with the disease, and asserts that the foot became the seat of diphtheritic inflammation, and he goes on to cite numerous instances to prove that the application of the expectorated material to an abraded surface will produce the disease, in other words, that the disease is susceptible of innoculation. This statement, however, is not to be taken in all its length and breadth, even though Brettonnau, himself, has made it.

Now, with reference to the *nature* of the disease. It consists in

an inflammation, the characteristic of which is the production of a thick, leathery membrane upon all the parts affected by it. Unlike croup, it does not confine itself to the breathing tubes, but the membrane passes over into the pharynx, passes upwards into the nose filling the nasal passages, and, unlike croup, if there has been an injury, or an abrasion of the tongue or cheek, patches of membrane will form thereon, at the seat of the injury. By European observers, it has also not unfrequently been seen upon parts where the epidermis has been removed by a blister, which extending in various directions, often becomes a very formidable disease. The fatality of this disease does not alone consist in an obstruction to the tubes which are the seat of the deposit; there is a *constitutional* element in it Unlike croup, it is what physicians are in the habit of calling a *blood disease.* I do not know whether the blood is contaminated or not; but it certainly appears to be a disease of the *whole* system, for in many instances, where the membrane is entirely removed from the air passages, the child, though apparently beginning to get well, will suddenly sink and die. In many instances this disease comes on with violent chills. In one case, I remember that a young lady was seizeed with these chills while in church; they became so violent that she was obliged to go home, and shortly afterwards had sore throat. In this respect it has some resemblance to the epidemic erysipelas. The *fever* attending the disease is often very high, and in some cases we have *vomiting* at the very onset of the disease. This is not the mode, however, in which they all come on. A great many cases come on very insidiously after the manner of some cases of croup, and often much more slowly than croup. I saw a physician attacked by the disease, who evidently had contracted it while driving about among his patients. He was seized first with a cold chill, which was soon followed by a flushed face, then another chill, then another fever, and then a third chill with a recurrence of the fever. On seeing him I asked, "what is the matter?" "I really don't know," said he, in a thick, husky voice, indicating some enlargement of the tonsils and this led me to examine his throat, and there I saw a patch of this exudation, about as large as a new penny, nearly circular and surrounded by an ugly looking dark line, the nature of which could not be mistaken. He very soon got well. Do not understand me now as describing the *general* mode of the invasion of the disease, I merely select these cases for the sake of illustrating the *various* and peculiar modes in which it makes its attack.

I was describing to you yesterday the mode of invasion of diphtheria. I gave you a particular mode of invasion for the purpose of illustrating the important fact that the disease is not a *local* one in its character. For although the disease has a local manifestation, yet it appears only in certain conditions of the system. How it first affects the system we cannot say. Were it proven that the disease can be communicated by inoculation, we should say the contamination affects the *whole system first;* and afterwards produces its

local manifestation at the point where the inoculation took place, in the same manner as syphilitic disease. Now with regard to the *symptoms* of the disease more particularly, I have seen about twenty cases of this disease, and I suppose in these twenty, so far as I can judge from the accounts of the disease, as it occurred elsewhere, I have seen about all the modes of invasion peculiar to this affection. They may be divided under two heads. Those in which the *constitutional symptoms* are active in the beginning, and those in which the disease makes its invasion *very insidiously*, and only becomes manifest by the appearance of a patch of exudation upon one or other of the tonsils or in the fauces. In this latter class of cases the children do not complain of much ill health, yet it is apparent that they do not feel exactly well, and have, as a rule, not much disposition to play.

In some cases you find the patient in bed, amusing itself with its playthings, and the mother being afraid that something was about to happen, has sent for the doctor. When you speak to the child, it answers you in a confident, full voice, perhaps a little hoarse. You will learn from the mother that the little one has had some cough. On examining the throat on the *outside*, you find it a little swollen ; the *glands* on the outside are a little swollen. You get a spoon, depress the tongue, and looking into the fauces you will very likely see a little patch of membranous exudation, about as big as a dime, a whitish membrane lying upon one of the tonsils surrounded by a lively injection, sometimes surrounded by a pretty deep *venous* injection, or at least a venous color. *Then you have the diagnosis.* If this patch of the peculiar membrane of this disease remains, there is danger that it will gradually spread and produce very serious consequences. I saw a child just in this condition about two weeks ago. You would hardly have supposed that there was any need of apprehending danger. The pulse was not very rapid, perhaps about 100, the countenance fresh, the child only appearing a little paler than usual. The tongue was not particularly covered with any coating, nor yet dry. While the attending physician and myself were talking over the case in an adjoining room, I noticed the child tipping over its head, to look and see who those people in the parlor were. I state this little circumstance to show you that the child evidently did not feel very sick. We examined the throat and found one of these patches on one of the tonsils, and extending over the uvula ; both tonsils were swollen and red. Almost any one would have said this child will get well, there is nothing to be alarmed about—but the doctor was alarmed ; he told the parents that he feared the child would not recover. The voice was not very much altered, there was just enough of hoarseness to show that the inflammatory action was passing down into the trachea, although there was no membrane in the larynx as yet ; but from the tendency of this thing to *advauce* it seemed to me that it would push its way into the trachea and larynx, and destroy the child. I never saw the child again. Eight days afterwards, however, I saw its name in the newspaper in the catalogue of deaths.

I have not seen the doctor, and do not know how the child died; I suppose in the usual way, from extension of the membrane.

That the disease is a *constitutional* one, I think you will see from such a case as the following: The case is that of a girl, eight years of age, who while in apparent good health, was attacked on the 3d of January with what appeared to be an ordinary sore throat. Yet there was enough change in the general appearance of the patient, to induce the parents to call in a physician. The physician discovered upon one of the tonsils a portion of this membrane; he combatted the disease as well as he could by local applications and general remedies. In six days the membrane had entirely disappeared, leaving the tonsils still swollen and red. On that day, however, this little one began to have *vomiting*, and in short the peculiar form of ill health, that indicates the approach of *scarlet fever*. The scarlet fever ran its course regularly The tonsils in the meanwhile, although very much swollen and disposed to ulcerate, *were not at any time the seat of membranous exudation*, they were *entirely free from membrane during the whole course of the scarlet fever*. When scarcely convalescent from scarlet fever, it was seized with *catarrhal* symptoms such as usually precede the eruption of *measles*, and in a couple of days it had the measles eruption all over the upper part of the body. On Friday of last week, the eruption of measles had entirely disappeared from the body, and now the throat began to be sore again, and on Saturday morning the *membrane* once more made its appearance; this must have been some eighteen days from the beginning of the disease. This membrane has resisted all applications that have been made to it, it is now extending forwards into the fauces, and backwards into the œsophagus, and apparently downwards into the breathing tubes. The child will in all probability die. On looking over this case we cannot fail being impressed with the idea that there is a *constitutional element* in this disease. Here we see the disease, as it were, jumping over two of the most formidable affections of childhood, the *constitutional element* still remaining, and as soon as these two diseases had passed away, this *constitutional* disease, diphtheria, again made its appearance in its own peculiar form, producing its own peculiar results. These cases taken together will suffice to show you the mode in which this disease makes its invasion.

Now, a word or two with regard to the *character* of the *membrane*. I have had several opportunities to examine this membrane; here are some specimens coughed up by a young person, some 14 years of age. This membrane you will observe, differs somewhat from that formed in ordinary croup. The membrane of croup is not usually formed so *thick* as that, neither does it possess that coraceous or leathery character. Both membranes are formed in about the same way, and although the constitution of the two is not exactly similar, still there is nothing in the diphtheritic membrane, that will enable you to positively determine its character under the microscope. These membranes are formed in the same manner as are all false membranes, namely, by a coagulation of the plastic portion of

the blood forming threads or filaments, without the intervention of cells. It is a fibrillation of fibrine. In this respect it does not differ from the membranes formed during the progress of what are called *healthy* inflammations, such as pleurisy, pericarditis, etc , with this exception, in *this* tissue there is a variable quantity of *granules;* but no *cells*, belong to it properly. If there are any cells, they have come from the membrane on which it has been formed. These granules have in some parts of the membrane a *linear* course, in still certain other parts the granules seem to have no definite arrangement, but are held together by a certain matrix, thus forming a strong membrane. Some of these granules under the microscope appear to be *fatty;* sometimes the granules are definitely arranged in fibres; at other times there are no fibres at all, the granules being all mixed up together. The same membrane will frequently enough show these two characteristics as distinctly as would two different specimens. The difference between this membrane and that of croup, consists in the firm coraceous character of the former, and its more certain constitution by fibres, its greater abundance of granules and in the absence of *formative cells* to be converted into fibre. The membrane of diphtheria is properly speaking, formed by the fibrillation of fibrine, whereas that of croup is formed first by the production of cells, and the subsequent transformation of these cells into fibres. In the diphtheritic membrane, that transformation process is not observed. The fibres are formed directly in the beginning, out of the exudation. The attachment of this membrane to the parts on which it is produced, is very much like that of ordinary croup, it is perhaps a little firmer, its tissue being firmer. The disposition of this membrane to *reform* is very remarkable, and is perhaps, one of the most prominent characteristics of this tissue. The membrane of croup is sometimes renewed, but not so often as is the diphtheritic membrane. This membrane like that of croup is prone to extend itself down the trachea, even to the last division of the bronchial tubes. Sometimes it takes its course down the pharynx and the œsophagus into the stomach. There is still another form of this disease, demominated by European writers as "cutaneous diphtheria," which forms upon any abraded surface, more especially that produced by a blister, which is recognized by the occurrence of this same coraceous membrane upon the naked surface. From the point affected. an ugly inflammation extends itself in various directions, and if there is a scratch, wound, or ulcer, in the neighborhood, it is likely to become covered with the exudation; although it is not likely, when this "cutaneous diphtheria occurs, that you will find a membrane in the throat; hence cutaneous diphtheria is described separately from the *mucous* diphtheria. In some cases of mucous diphtheria, the membrane is formed in the vagina. I am not aware that it has been found in the rectum, although I see no reason why it should not occur there; at least I cannot call any case to my mind where it has been found. The most *dangerous* locality for the formation of this membrane, is certainly the *throat.* It is generally regarded as *least* dangerous when it occurs on the *skin,* it

being, when it forms here, far more ameniable to treatment, though not unfrequently fatal through constitutional influences. If the membrane, when forming in the *throat*, does not invade the *larynx* the chances for recovery are far greater; unfortunately the larynx is very rarely spared, and the patient dies with symptoms of suffocation, resembling those of croup. A certain portion of the children affected with this disease, do not have any membranous formation in the trachea; *these* are the *hopeful cases*, although it is true that the *tendency* of the disease lingers sometimes even after the membranes have disappeared. Dr. Macready, had such a case some time ago. In this instance after some days of treatment, the coraceous membrane was discharged, after which the child seemed to be doing very well indeed; all the membrane had disappeared from the throat, and there was no symptoms of its reformation; there was nothing to induce the conviction that there would be any obstruction of the passages, the breathing being easy and natural, the throat clear of all membranous material. The child was then somewhat weak, but still strong enough to take a ride out. One day, however, it sank suddenly into a state of collapse, without any known cause, and shortly afterwards died. I had just such a case as this myself, where after the membrane was discharged, the patient seemed to be doing remarkably well; he was well enough to sit up in his chair, although too weak to go about. So far everything was promising; but suddenly, one day, he was seized with a fainting fit, the pulse became more and more rapid, and weak, his face became very pale, looking exactly as if some internal hemorrhage had taken place, and in this condition he died. You will notice then that this disease has a sequel. There is a constitutional element in it, that does not alone manifest itself in the throat. Nor can we regard it as a trifling affection. It is true that it is not so fatal as membranous croup, because there are a considerable number of cases in which the membrane does not extend itself down into the breathing tubes.

(The doctor then took up the treatment in detail. As it would encroach too much on our allotted space, we give merely the conclusions, deducible from his remarks.)

1st. That inasmuch as diphtheria is a *manifestly constitutional* disease, so must our main reliance be placed on *constitutional treatment*.

2d. As the disease is of an *Asthenic* type, the remedies employed must be such as will give tone to the system. The best of these are the fluid preparations of iron, quinine, etc., together with an invigorating diet, and the occasional use of stimulants.

3d. The administration of mercury with a view of obtaining its *constitutional* effects, is a doubtful expedient, but the application of *dry calomel* to the ulcerations of the throat, is of decided benefit.

4th. The application of the nitrate of silver to the *membrane itself* is of no special service, whereas if applied to the parts immediately around the membrane, it tends to prevent its further extension.

5th. The administration of chlorate of potash, both in the form

of a gargle, and as an internal remedy, though not as was claimed a specific in this disease, is still of some benefit, and should therefore form a part of our treatment.

On a Case of Rupture of the Right Auricle of the Heart. By J. OREGEN, Esq., M. R. C. S. Eng., &c.

The following case occurred in my practice a short time since :—

On the evening of April 7th, I was hastily summoned to visit a man a very short distance from my residence, who was said to be in a fit. I immediately obeyed, and on my arrival found him stretched upon the floor, apparently dead. He was pulseless and insensible, and on placing my ear over the region of the heart, I faintly, but distinctly, heard it beat two or three times when it entirely ceased. As the cause of death to my mind was not sufficiently evident, I refused to grant a certificate, whereupon the friends desired that a post-mortem examination should be made.

The man, it would appear, met with an accident some two or three months previous, by the falling of a heavy piece of iron upon his head, which incapacitated him from following his avocation as a sail-maker for some days, and I was informed by the friends that he suffered more or less from the date of the injury to his death with headache, and occasionally very slight aberration of intellect ; and as he was in Government service, it was principally on account of that accident that the friends desired the post-mortem examination, as, in case of death resulting from the effects of that injury, the widow would be entitled to a pension.

Assisted by my friend, Mr. Cope, a surgeon residing in this town, I made the post-mortem examination. The body was that of a robust, healthy-looking man, apparently about thirty-eight years of age. There were no marks of violence; the features were placid and pale, but the region of the chest was quite livid, while the other parts of the body were of a natural hue. The scalp was first examined, but we could not discover the cicatrix of any old wound. We then proceeded to take off the calvaria, which was exceedingly thick, and examine for old fractures ; not that we expected to find any, but only to satisfy the friends, who positively stated his skull was fractured when he received the blow on the head. The membranes of the brain were all healthy, except at the summit, where they were adherent to the surface of the brain to the extent of about one inch and a half in diameter. The longitudinal sinus and meningeal arteries were quite empty. The brain itself was healthy, and on slicing it away was found quite exsanguineous. The ventricles were carefully examined separately, but nothing morbid could be discovered ; and we could not detect anything in the head to account for death, even as a remote cause. We then proceeded to examine the chest, and on opening it our attention was first attracted to an enormously distended pericardium, into which we made an incision,

and a very large quantity of blood escaped into the cavity of the chest in a semi-coagulated condition. The heart, with its opened pericardium, was then very carefully detached, and minutely examined. It was of ordinary size, flattened from before to behind. Its weight was not ascertained. The right auricle was first examined, and on carefully passing the little finger along the ascending cava a rent was discovered on the anterior aspect, situated between the entrance of the inferior vena cava and the right auriculo-ventricular opening, about six lines in length, and partly filled with a plug of fibrin. The walls of the right auricle were, if anything, a little thinner than natural; but the remainder of the heart was perfectly healthy and of usual thickness. There was no dilatation in its walls, neither was there any fatty degeneration, nor any aneurism communicating with the bag of the pericardium. The valves were all healthy. The several cavities were empty, with the exception of the left ventricle, which contained a small quantity of coagulated blood. The lungs were next examined: the right was adherent by old adhesions to the pleura, which could with difficulty be separated. The lung tissue on both sides was perfectly healthy. The abdomen was not examined, as the cause of death was sufficiently evident in the chest.

Remarks.—These rapidly fatal affections of the heart are fortunately, very rare; but when they do occur, we generally find the rupture to be attributable either to fatty degeneration or dilatation of its walls, neither of which could have been a cause in this case. Amongst the natural causes of ruptured heart (although exceedingly rare,) violent mental emotion is the chief, but which could not possibly have been present in the subject of this case, as he was sitting perfectly tranquil and quiet in his easy chair at the time of his death; and it was only a few minutes before that he told his wife he was then in a better state of health than he had been for some years past; and nothing occurred during the day or evening to give rise to any mental emotion. In November, 1843, a somewhat similar case was reported by Dr. Stroud to the Royal Medical and Chirurgical Society, and mentioned in Professor Taylor's work on "Medical Jurisprudence," which occurred in a young man aged twenty-nine, but which differs in this respect from the present, that it did not prove so rapidly fatal, as he lived about ten hours after his first seizure; while in this case, which occurred in my practice, the patient only survived about eight minutes after he was seized. In the case of Dr. Stroud, also, there did not appear to be any morbid condition of the heart. The chief points of interest in this case, therefore, are the absence of anything which could give rise to the rupture, and the very rapidly fatal results.—*London Lancet.*

Action of Alcohol upon the Economy.—According to the usually-received opinion, alcohol introduced into the circulation by absorption from the alimentary canal, becomes rapidly destroyed by combustion with the oxygen of respiration. Carbonic acid and water may be the immediate results; or, as is more generally admitted, the alcohol passes through a series of transformations, representing derivatives more and more oxygenated, as aldehyde, acetic acid. oxalic acid, and, finally, carbonic acid. The results of a series of experiments instituted by M. M. Duroy, Lallemand, and Perrin, point to different conclusions. According to these, alcohol is not destroyed in the blood, since it may be found in all the liquids and the tissues, while the products of combustion are not found there; and, moreover, it is eliminated by the various channels, as the lungs, the skin, and especially the kidneys. They conclude—1. That alcohol is not an alimentary substance, it acting only as a modifier of the nervous system. 2. It is neither destroyed nor transformed in the economy. 3. It becomes especially concentrated in the liver and in the brain. 4. These facts explain the production of certain organic and functional changes in the liver, brain and kidneys.—*Med. Times and Gazette*, November 26, 1859, from *Gaz. Med.*, No. 46.

Smoking the Exciting Cause of Cancer.—M. Bouisson has published a valuable article in the *Montpelier Medical*, wherein he endeavors to prove that smoking is often a very active exciting cause of epithelial cancer about the tongue, lips, sides of the cheeks, or soft palate.

M. Bouisson has collected sixty-eight cases of cancer and cancroid of the lips, in which the habit of smoking was either carried to excess, or was very inveterate. He considers that such morbid products have more frequently been seen since the custom of smoking has become general; but concedes that, for the development of cancer, there must be the proper diathesis. The author maintains, however, that this tendency would often have remained latent without the local exciting cause to which we have alluded. He further states, in support of this opinion, that labial cancer mostly attacks the lower lip, where the cigar or pipe rests; and that such cancer is rare with women and children. One young lady is mentioned who suffered from the affection; but she used by stealth to smoke immoderately.

The more inveterate the habit, the more frequent the cancer, especially with those who smoke short pipes and strong tobacco. Cleanliness, long pipes, and mild tobacco, may keep off the complaint.

M. Bouisson operated upon a medical man of Barcelona, who, in the Spanish fashion, allowed the smoke of cigarettes to escape through the nose. The nostrils were filled with epithelial vegetations.

No doubt M. Bouisson's paper is extremely valuable; but it might be asked whether the disease in persons laboring under the diathesis would not have broken out elsewhere. It is, besides, well known that labial cancer has been found in patients who never smoked in their lives. That smoking *may* act as an exciting cause, is, however, both rational and in accordance with fact.—*London Lancet.*

Hysteric Tympanitis, or Phantom Tumor of large size.

A very remarkable example of hysteric tympanitis developed to a most unusual degree, has been for several years occasionally under notice at the Metropolitan Free Hospital. The subject of it is a girl, aged 19, unmarried, of peculiar physiognomy. Her countenance is expressive of intense morbid self-concernedness, the eyes downcast, and her aspect indicative of moral duplicity. She was originally under the care of Dr. Ramskill, and for some months was an in-patient, in order that her case might be thoroughly observed.

The following notes of her case as to her state were made on September 19, 1857.

"Her abdomen presents pretty exactly the appearance of a seven months' pregnancy, and her father even went to the length of turning her out of his house on the supposition that such was her condition. She applied to several medical men, and very different opinions were expressed. On admission, it was found that the abdomen, although round and full, was of clear percussion note in every part, that the umbilicus was depressed instead of protruding, and that no tumor could whatever be felt. On vaginal examination the uterus was found small, and its cervix of due length. Respecting the absence of any tumor in the abdomen, some caution must be exercised in giving an opinion, as she invariably holds the muscles so tense and board-like, that pressure cannot be made with any satisfactory results. At times the abdomen will appear to be larger on one side than on the other, and the external contour as a very large ovarian cyst is very exactly simulated, but then there always remains the clear percussion note, which is inconsistent with such a supposition."

The girl has since been in several other hospitals; and she states that at one she was strongly urged to submit to the operation of paracentecis. Latterly she has again been attending at the Metropolitan Free Hospital, under the care of Dr. Jones. The prominence of her abdomen is now such that any one, not having witnessed the trial of chloroform, might well be excused for entertaining the utmost skepticism as to the possibility of its disappearance. It exactly resembles that of a patient at the full period of pregnancy. The eye of a careful observer may, however, detect some differences between the girl's bearing, and that of a pregnant or dropsical

person. Her back is more arched, and her gait has less of the swinging motion from side to side—"waddling"—a difference no doubt due to the fact that she has no real weight to carry. About two weeks ago, in order again to make a thorough and satisfactory examination of the state of things, she was put under the full influence of chloroform."

"The abdomen rises evenly in all directions, and is most prominent about two inches below the level of the umbilicus. A brown streak extends from the umbilicus to the pubes. The area of clear tympanitic resonance extends over the whole front of the abdomen. The measurement over the most prominent part is thirty-three inches and one third. Posteriorly both loins are dull on superficial percussion, the left side being entirely dull, even on the deepest percussion, while on the right a forcible stroke elicits a decided degree of resonance. As unconsciousness was supervening, under the influence of chloroform, the abdomen at once flattened, until not the slightest appearance of tumor existed. It was soft in all parts, and the promontory of the sacrum could very easily be felt. No escape of flatus was noticed.

"The abdomen now measures only thirty-one and a half inches. Examined per vaginum the cervix uteri was found to be long, and in every way healthy; the uterus was freely movable. Feces are felt in the rectum, and a mass the size of a small egg, to the left side, about which some difference of opinion existed as to whether it was fæcal or otherwise. As the influence of chloroform was passing off, the abdomen quickly resumed its original state, and in a few minutes after, when she had regained consciousness, it was nearly as prominent as ever. She took the chloroform remarkably kindly, and recovered from its effect very quickly."

One of the interesting features in this case is its long continuance. All forms of anti-hysteric remedies have been exhausted upon it without the slightest result. Marriage is, indeed, in all probability, the only remedy which can be expected to influence a condition which partakes more of moral than of physical derangement. Several similar cases have recently been under our notice, in one of which the patient has been told by several surgeons that she is the subject of ovarian dropsy. In this instance, also, as in the above, the patient is unmarried, and the same peculiarities of aspect are exhibited as have been just described. The value of the exhibition of chloroform as a means of diagnosis can be scarcely overrated. The cases are those to which mistakes in diagnosis are of the utmost importance, since they would inevitably lead either to unfounded imputation on the patient's chastity, or to the belief in the existence of incurable disease, or to the attempted performance of most dangerous operations. The records of surgery contain the narratives of not a few of such, in which either paracentecis has been performed, or the still more fatal mistake committed of laying open the abdomen, in order to extirpate an ovarian cyst. Against such errors the exhibition of chloroform affords entire security, and when any doubt offers about a case, it ought never to be omitted. As insensi-

bility is induced, the board-like condition of the abdominal parietes, which had previously baffled all attempts to ascertain the exact state of the viscera, disappears, the diaphragm rises, the belly flattens out laterally, the anterior prominence disappears, and the hand can be passed back till it touches the sacral promontory.—*Med. Times and Gaz.*, Dec. 10, 1859.

Abstract of the Report of Dr. Wilson Jewell, on Meteorology and Epidemics for Philadelphia for the year 1859; read before the College of Physicians at its last monthly meeting, Feb. 1st.*

The mean temperature of 1859 was three-quarters of a degree below that of 1858, and about two-tenths of a degree above the average for the last eight years.

97° was the maximum temperature for the year, and 2° below zero was the minimum.

The warmest day was the 13th of July, while the coldest day was the 10th of January.

The winter and spring were about three degrees above the average temperature for the last eight years, while the summer and autumn were nearly two degrees below the average.

The amount of rain that fell during the year was 54¾ inches, which was ten inches more than the average for the last eight years. It was more than 13 inches greater than the quantity which fell in 1858.

The deaths in our city for 1859 amounted to 9,742. This number was less by 955, or 9 per cent., than those in 1858, and 12.19 per cent. below the average for the last four years.

Compared with the returns of deaths and their ratio to population in the following named cities, it will appear that our city presents a very high standard of salubrity; equal to, if not surpassing the most healthy city in the world.

	Population.	Mortality.	Ratio of deaths to population.	Deaths to each 1,000	Per ct. of deaths to population.
Providence,	52,000	982	1 in 52 09	19	1.83
Boston,	180,000	3,738	1 in 48.15	21	2.07
New York,	800,000	21,645	1 in 36.09	27	2.70
Philadelphia,	625,000	9,742	1 in 64	15	1.55
Baltimore,	253,000	5,039	1 in 50.02	20	2

The greatest inequality will be seen to exist between the death rate to population of our own city and that of our sister city, New York. These figures will furnish some idea of the healthiness of the two cities. Notwithstanding the disparity between the deaths in Philadelphia and those in New York when compared with the

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* We are indebted to Dr. Jewell for this abstract, and for his promptness in acceding to our request for its early publication.

population of each city, the City Inspector of the latter city says in his last report that, *New York city, at this day, can lay claim to the privilege of being numbered with those of the most healthy in the world.* It is unnecessary to offer a single comment upon this very extraordinary statement, when the figures contradict so positively the assertion. Philadelphia shows a death rate of 1 in every 64 of the population, and New York 1 in 36.09!

It is to be regretted that the inspector did not avail himself of the above statistical information. The death pressure upon population in New York is nearly double that in Philadelphia.

The city of Providence, in a sanitary aspect, has been characterized as a model city, and yet a comparison of the figures in the above table shows, that the death rate in our own city was as 1 in 12 less than in Providence.

No epidemic has befallen our city, nor have the usual endemics prevailed to any extent during the year. In many instances, the diseases of the different seasons have been less frequent and more mild in their character.

During the fall and winter months, and in the early spring, croup and inflammation of the bronchia and lungs among children were the prevailing diseases. With croup, there was observed the steady increase in the number of fatal cases that I have alluded to in several former reports. In inflammation of the lungs the deaths did not reach the number recorded for 1858. There was nothing, however, unusual in any of the winter diseases beyond their usual characteristics.

Scarlet fever, which had prevailed to a great extent for several previous years, was still among us when the year opened. For the most part, the cases which occurred did not present a highly malignant type of fever, and yielded readily to a mild treatment. The deaths, however, were nearly equal to those of the former year, and amounted to two hundred and thirty-two.

I cannot omit to mention in this place the appearance of a few cases of diphtheria, or malignant or putrid sore throat. Towards the latter end of the year these cases increased in number. Several of them, I have understood, were fatal, but whether they were certified to and classed in the record with sore throat, scarlet fever or croup, I am unable to determine, as I find no death recorded from diphtheria. I did not witness a single malignant case of this fatal disease in my own practice, but in a number of cases of sore throat accompanied with high fever, vomiting, frequent pulse and red tongue, which came under my care, I observed a remarkable tendency to congestion of the mucous tissue of the fauces of a dark livid hue, and in a few instances to the exudation of a whitish plastic lymph tending to ulceration. These cases were accompanied with great debility of the system. They were evidently characteristic of the epidemic form of diphtheria, but in a mild type, as none proved fatal.

None of these cases were in any manner involved with scarlet fever,

and in one instance the patient had passed through that disease a few months previously thereto. Nor did any of them resemble croup.

How nearly this malignant form of disease, which has prevailed in several of our large cities and towns to an extent sufficient to create alarm, is identified with scarlet fever or with membranous croup, or whether it derives its origin from a distinct and peculiar poison, becomes an important question for solution. The indications are, that ere long we may have to combat with this formidable enemy, which, as yet, particularly in its malignant type, has defied, in a majority of instances, the most watchful and judicious treatment.

The invasion of cholera infantum took place about the usual period of the summer, and was most prevalent in July. Its ravages by death, however, were not so great, by 254, as during the previous year. The number of deaths recorded were 408, a lower mortality, compared with population, or deaths from all diseases, than has occurred for many years. The cause of this remarkable diminution in the deaths from this infantile epidemic may be ascribed, in part, to the favorable condition of the summer heat, which was two degrees below the average for the previous eight years—to the absence of a choleraic influence, and the increased facilities for hygienic protection afforded that class of the population, who are deprived of the advantages of a pure atmosphere in their ill-ventilated houses. Thus by cheap rides in easy and commodious city railroad cars, in almost every direction, they reach, within a few minutes, the rural environs of our city, and there, with their feeble, sickly and emaciated offspring, enjoy the luxury of inhaling the pure, cool and invigorating air of the country.

Of the entire number of deaths for the year, 5,157 were males, and 4,585 were females, an excess of 12.52 per cent.

Still-born children foot up 658 during the year. These, with deaths from casualties of various kinds, and from debility and old age, numbering in all 1,709, should be deducted from the total mortality, if we would ascertain the deaths from morbific causes. By this analysis, there will be found only 8,033 deaths, or one death in every 76.5 of the population, have been caused by diseases. This view will present the sanitary condition of our city in a still more favorable light.

Before the expiration of the first year of life 2,969 children perished, exclusive of still-born. Before the tenth year, there perished 5,005, or 51.37 per cent., more than one-half of the annual mortality.

This large proportion of waste of infant life in our city presents a sad picture of the prevalence of sanitary evils, and of mismanagement on the part of parents and others, who have the oversight of this interesting portion of our population.

The deaths under twenty years were 5,415, while those above that age were 4,327. This division gives 55.58 per cent. of the mortality to the children, or those under twenty—that period constituting the division line between adults and minors. In 1858, the

deaths in New York city of those under twenty were 67.70 of the whole number, an excess of 14.32 per cent. over our own city for the same year.

Consumption of the lungs furnished 1,505 deaths. This amount is 9 per cent. less than in 1858. Contrary to what is usually observed, the male deaths were in excess of the female 7.57 per cent.

The deaths from this disease were equal to 19 per cent. of the total mortality. To the population, they were as 1 to every 415.29, or as 2.40 in every 1,000.

The heaviest mortality from consumption, in any decade of life, was between that of twenty and thirty years.

Convulsion claims 520 deaths, and maintain an ascendancy over any other disease of infancy in swelling the bills of mortality.

The number of deaths from the various fevers amounted to 560. This limited amount exemplifies the healthy condition of our city, when placed in comparison with those of former years, and with the deaths from fevers in other large cities. The proportion to all causes, exclusive of still-born, was as one in every thirteen, or 7.16 per cent.

The deaths from scarlet fever give 232, nearly equal to those in 1858. The epidemic influence still lingers with us, and, according to the returns for the last quarter of the year, may be on the increase.

Of deaths from small-pox, but two occurred during the entire year, and none from varioloid.

I cannot refrain from expressing the conviction, judging from the evidence afforded by the statistics of former years, that, ere long, our city may suffer from an epidemic influence, which shall inflict upon us that most loathsome of all diseases, small-pox. Adopting this opinion, I regret to add, that we are by no means in a proper state of protection, as far as relates to prophylactic measures, to contend with this dangerous enemy to life—from the fact that for several years public vaccination has been fearfully neglected, through the supineness of our public authorities in declining to appoint collectors of cases for vaccination as in former years. As a consequence of this omission, only 195 persons were vaccinated under this ordinance during the year. No censure whatever can be laid upon the medical gentlemen, appointed by councils as vaccine physicians. Their duty is to vaccinate, gratuitously, all persons who call upon them at their offices, which duty they have faithfully performed. The imperfection exists in the want of collectors of cases, who shall make house to house visits in the several wards, and gather the names and residences of the hundreds of children, and even adults, who are unprotected by vaccination, and who, in the event of an epidemic of small-pox, may fall victims to its ravages. For the past six years, but few of those for whom this humane ordinance is intended have undergone the process of protection when compared with the many who received its benefit in previous years, under the ordinance recognizing collectors of vaccine cases. On more than one occasion, the board of health have called the atten-

tion of councils to the importance of an improved system of vaccination, but without any favorable response. The medical profession have spoken their minds freely on this subject, and, in the event of an epidemic of small-pox visiting our city, in its present unprotected state, as far as public vaccination is concerned, let the censure fall where it properly belongs.

Remarks on the Epidemic of Diphtherite, (or Hog-skin Angina.) Translated from the French, by O. D. PALMER, M.D., Zelinople, Pa.

Notwithstanding the positive opinions of some authors to the contrary, diphtherite is an affection still but little known. Whilst maintaining this position, it seems to me proper that those who have been called upon to observe it, should make known, not only what they have been able to see particular in the new epidemic, but also the comparative appreciation of the general facts, as they have been observed by themselves, or as they have been learned from others.

In the commencement of this epidemic, with my memory surcharged with the writings most recent and esteemed, and more especially with the original works of M. Bretonneau, I considered myself armed against it; all seeming to me simple and clear. The mode of propagation, contagion, progressive extension; the disease extending from the throat or nasal fossæ into the rest of the organism, at first wholly local, drawn to the exterior, and only affecting the whole system from the external to the internal parts; the therapeutic success, dependent on the energetic application of the wholly surgical means, that is, dependent on the hands of the physician—all was simple, and my only expectation was to have to follow the best models.

My hopes have been betrayed; the perfect image that I awaited has discovered itself in a very different shape, as will appear from the picture that I am about to trace.

I have seen an affection raging among different populations, attacking at the same time individuals having no communication with each other, without regard to other diseases with but few rare exceptions originating from an unknown influence, and seeming to choose its subjects indiscriminately. The disease begins like a severe eruptive fever, in the midst of a large retinue of general symptoms, with considerable tumefaction of the ganglions, even when the false membrane is hardly developed; commencing in the throat, to extend from one part to the nasal fossæ, and from another to the respiratory passages, and sometimes to the digestive apparatus; showing itself also in the auditory conduit, at the vulva, in the vagina, in cutaneous lesions; attacking various points of the organism, without relation to contiguity—the throat with the vulva, the throat with the bronchiæ, the larynx remaining sound; the throat, then the intestines. These coincidences, indicated by the symptoms, have not

been justified by the opening of bodies ; but in two cases of tracheotomy, I have been able to demonstrate the absence of false membrane in the trachea, whilst it existed in the bronchia, or was in the state of being formed. In a good number of instances the adventitious membrane has been detached without treatment, or very little, and as quickly as when cauterizations daily or even more frequently have been practised. This is no hindrance to the re-formation of false membrane, in parts contiguous or remote, and these new attacks have taken place, both when the throat contained the pseudo-membrane adhering, and when this was completely free. That is to say, we have observed an infection, originating more from epidemic influence than from contagion, marching, in the manner of the exanthematous fevers, from the circumference to the centre, not always following the way of contiguity, in extending its characteristic products, little susceptible of being arrested in its progress by caustics, but sometimes yielding to the efforts of spontaneous reaction—an indication that we should endeavor to imitate, in furnishing the organism means of sustaining a frequently unequal contest.

All is linked together in the doctrine of M. Bretonneau. Generalizing the facts of incontestable contagion, he admits that in all circumstances the diphtheritic germ is deposited locally, as it is in syphilis. He forgets that with whatsoever part of the skin or mucous membrane the virus comes in contact, it is the throat, amygdalæ, and nasal fossæ, that produce, with some rare exceptions, the first vestiges of false membrane, belonging to this species of *angina.* It is different in this particular from syphilis, to which it assimilates, and which acts at first, and always, on the part where it is applied.

There is then, in all cases, and especially in serious cases of diphtherite, a diseased action internally succeeding to the contagion (when it is caused by this,) and subsequently producing a similar disease, as takes place in the eruptive diseases, variola, rubeola, and scarlatina, which likewise appear insidiously, and without our being obliged to refer their origin to contagion. May it not be the same in this pseudo-membranous angina ? I have offered sufficiently numerous examples before, and have remarked elsewhere, "its contagion is *possible;* it is not at all *necessary.*"

From the full conviction of the development of this disease *internally,* to that of its destruction, at once, by cauterization, is but a step ; this step has been taken, and numerous successes are furnished in support of the doctrine. They have been shown, doubtless, in severe cases, but much more often when the cure has either been wholly spontaneous, or effected by the mildest means. These successes have not been wanting to me, either, though I have confined my cauterization to the *isthmus of the throat.*

It is, then, by figures, that it will be necessary to resolve this important question, and its solution is required by science. Whilst awaiting, may we not be permitted to adduce the greater success in tracheotomy, since surgeons no longer *cauterize* the trachea after the operation, against the utility of such a practice in the larynx ?

With my own experience, and after an attentive perusal of the known facts, I think we are not far from the truth in considering this primarily a general disease, inclined to manifest itself upon the mucous membrane in the same way that the eruptive fevers do upon the skin. Doubtless this view is less seductive, in a therapeutic point of view, than the preceding one; for were it established, we should be left unarmed against this, as we are against the eruptive fevers, all the phases of which we are obliged to submit to, without the beneficial interference of heroic means. But if this is the truth, we must accept it as it is.

Pathological anatomy, chemistry, the microscope, have not as yet afforded very great aid to the study of diphtherite. The first of these, in explaining the internal lesions caused by this disease, has only confirmed, in regard to the interior, what clinical observation had established, in the living, in the parts accessible to view. It has shown, also, the liquid state of the blood, the vascular congestions resulting from this state, and the mechanical asphyxia caused by the false membranes obstructing the air-passages. It has examined, perhaps too negligently, the lymphatic system, which appears to play the most important part in this disease.

Chemical analysis and the lens, in ascertaining the fibrinous nature of the false membrane, have still not been able to distingush it from the *pultaceous covering* that accompanies a pathological state very different from the pseudo-membranous angina.

The chemists and micrographers ought to give us correct examinations of the blood at different stages of the diphtherite. This would probably open the way to a knowledge of the morbid state that certainly precedes a primitive modification of this fluid, before it is essentially altered by the enormous amount of fibrin thrown upon the mucous membrane—a consecutive alteration, that explains so well the hemorrhages and congestions, the debility so great and so slow to disappear, and those paralyses which hamper convalescence. *Gaz. Hebdom.—Boston Med. and Surg. Journal.*

The Veddah Tribe in Ceylon.—In the report of the proceedings of the Ethnological Society of London, in the *Lancet,* is a remarkable account of this barbarous tribe, of which little is known. Two skulls of individuals of the tribe were exhibited. The crania were small and very narrow, giving the zygomatic arches an appearance of extreme lateral projection.

The only detailed notices of these Veddahs are to be met with in the travels of Captain R. Knox, published about 200 years back, in the account of Ceylon by Dr. John Davy, and the recent work by Sir Emmerson Tennent. These writers, and also Mr. Bailey and Mr. Bradford, from whom recent communications had been received bear testimony to the fact that the Veddahs are the aboriginies of the island, and that before the Christian era they retired before invaders from the banks of the Ganges to the jungles and hills in the south-east of Ceylon, where they have remained isolated for

more than 2,000 years. A custom which they have of never, if possible, coming into contact with other people, and of not showing themselves even when they engage in matters of barter with the travelling traders of the country, accounts for the maintenance of their isolation, and at the same time identifies them with the aboriginal inhabitants, as described by ancient writers. The Veddahs seen by Sir E. Tennent had flat noses, prognathous jaws, were of low stature, and very degraded in aspect. Mr. Bradford, however, speaks of one whom he met with as resembling very much a Cingalese coolie; and it may be remarked that they speak a dialect of the Cingalese language, though the more degraded are described as scarcely possessing an articulate tongue, and as communicating with one another by signals and guttural sounds. The Veddahs go about in nearly a nude state, their hair falling down to their middle in matted lumps. They live in the forests, and at night seek shelter under rocks or in caves, or on platforms raised amid the trees. They depend for they subsistence on the bow and arrow, using their feet as well as hands in drawing the bow. In their diet they are omnivourous, but consider lizards and roasted monkey as the greatest delicacy. Sir E. Tennent says that they have no knowledge of a God or future state; no temples, idols, prayers, or charms; in short, that they exhibit no instinct even of religion. Their only ceremony is a sort of devil-dance, by which they avert evil. They do not bury their dead, but only cover them with leaves in the jungle. They have no idea of time or distance; no names for hours, days or years, and in the matter of education, are unable to count beyond five on their fingers. They have no amusements, and not even the rudest kind of music. The writer last quoted says further, that they are of gentle disposition, and though knowing nothing of virtue, rarely commit great crimes. They exhibit in a striking degree the effect of complete isolation, either in degrading man to, or keeping him in, a state of abject barbarism.

Claude Bernard's Lecture Room in the College of France.— The Paris correspondent of the *Medical Times and Gazette* gives the following description of the lecture of this eminent teacher of physiology:

It is a large square room, capable of containing six hundred students. At one side of the room, on an elevated platform, is the Professor's chair, immediately in front of which is a table, some ten or twelve feet long, on which all the experiments conducted in public take place. From the front of this platform the seats for the students rise in tiers. The roof is ornamented with four frescoes, representing Hippocrates, Aristotle, Buffon, and Linnæus. Elegant as is the general appearance of the room, it has a serious defect. The light, being derived from the roof, falls directly on the table, and any delicate operation, requiring close inspection, forces the Professor to place his head in a position which effectually intercepts

the rays of light on their way to the object under examination. In an adjoining apartment is the laboratory, which consists of two small rooms. In that nearest the lecture room are some small furnaces, and sundry glass cases, containing the larger instruments required for the experiments. In the centre of this room is a strong, solid table, about five feet by three, perforated in sundry places, so as to permit cords to pass through it, to control the movements of the animals subject to vivisection. The other room resembles a chemist's shop. In it are kept all the chemical and medicinal agents, as well as the smaller instruments. In one corner is a sand-bath, intended for experiments on cold blooded animals. Beneath these apartments, and connected with them by a stone staircase, are a series of cellars, dark and dismal enough, in which are kept animals of every description—dogs, rabbits, guinea-pigs, etc., etc.—with here and there huge basons and troughs, filled with frogs and other cold-blooded animals—all intended in their turn to be sacrificed and offered up on the altar of science.

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

A Practical Treatise on the Diagnosis, Pathology, and Treatment of Diseases of the Heart. By Austin Flint, M. D., Prof. of Clinical Medicine in the New Orleans School of Medicine; Visiting Physician to the New Orleans Charity Hospital, etc., etc., etc. Philadelphia: Blanchard & Lea, 1859. pp. 473.

Here we have another *new* book—a monograph of some five hundred pages, on the Heart, its diseases, etc. Is it "a desideratum" to have a book of this character just now? Or was it needed at all at present? A great many say that we have an infliction, of late, on us of books. The multiplication of books can certainly do no harm. The time, however, expended on many of them—compilations, for example—is time unthankfully occupied. But on the other hand, would it be right to limit the number of books to the discoveries of the age—to the setting forth of nothing but new matter? If such were the case, the number of books would be few, and

the size small. A volume of a few hundred pages, issued annually, would be sufficient to contain all of the additions to every branch of medical science. The author before us tells us that he has accumulated notes of about two hundred cases of the various cardiac affections. Are we to infer that these cases constitute the basis of the work? If so, what do they add to existing knowledge by Hope, Bouillard, Walshe, Stokes, Audry, Forget, etc? Two hundred cases of cardiac disease might be met with, we will venture the remark, without encountering a single lesion not hitherto described. Perhaps, however, Dr. Flint's cases are more prolific than common.

A liberal share of the work is devoted to *Physical Signs*. The author is no doubt more at home here than in Pathology. He wrote a very clever paper for the American Medical Association, on the clinical study of the heart-sounds in health and disease, and possesses some notions on the subject that he regards as original. Those who know most of the value of improvements in diagnosis, will be disposed to excuse the author's rehash of old matter, on account of his pretensions to having brought forward something to assist in discrimination.

But while on heart-sounds of health, the reader should not forget that we are not yet quite "out of the woods." No one, for example, can give a satisfactory explanation of the cause, or causes of the *first* sound. It is syncronous with the contraction of the ventricles, with the passage of blood from the ventricles to arteries (pulmonary and aorta), with the tension of the auriculo-ventricular valves, and with the impulse of the heart against the left side. As a consequence, we have had physiologists attributing the first sound, first to one then to another of these elements; and also to all of them combined. The most recent writer on physiology regards the sound in question as due entirely to the auriculo-ventricular valves. The author before us thinks these valves are concerned in its production, but he associates with them another element, the impulse of the heart against the chest.

"One of these elements consists of a valvular sound due to the action of the mitral and tricuspid valves. The other element, in the author's opinion, proceeds from the movement of the apex of the heart against the thoracic walls. In a practical point of view, however, it is unimportant whether the latter element be thus explained, or whether it be accounted for on the hypothesis of a sound adequate to its production, due directly to muscular contraction."

Here we have set forth the author's opinion as to what produces the *first* sound, accompanied by a statement that a knowledge of the *cause* of this sound is *unimportant* in a practical point of view. We will not quarrel with the author about his opinions as to what produces the sound, for however erroneous they may be, he has a right to them until the truth is known. But we are not pleased to see him regard the sound as *unimportant.* Was anything ever certainly known of pathology, before a knowledge of physiology? Axiomatic, it seems to be, that a knowledge of physiology should precede all notions on pathology. If our author is yet in the fog on physiology, on what it is that causes the normal sounds of the heart, what does he know of abnormal sounds? "Mitral lesions," he remarks, "impair the mitral portion of the valvular element of the *first* or systolic sound." Suppose now that we adopt the theory of M. Beau, who attributes the first sound to *auricular* contractions, what becomes of the author's statement that mitral lesions modify this sound? *Beau* would have the sound primarily modified only when the auricles are the seat of disease.

When the heart is in a healthy state, all of the blood of the organism passes through it once in every two or three minutes; and so noiseless is this process, from the harmony of valves, cavities, orifices and vessels, that but two sounds are heard, called *first* and *second* sounds. Any others, proceeding from the movements of the heart, either replacing or superadded to these, are abnormal, and designated by the general term "*cardiac murmurs.*" These murmurs, it is surmised, may originate from something in the interior of the heart, *endocardial* murmurs; or from causes confined to the exterior, *exocardial.* Then we have some connected with blood vessels, *vascular* murmurs. Murmurs, again, are described as *organic* when connected with lesions of structure, and *inorganic* when connected with lesions of function.

We give the following from the work as a specimen on diagnosis. In these paragraphs questions are discussed that should receive attention at the hands of all who hold themselves in readiness to care for cardiac diseases:

"*Can the particular seat of valvular lesions be determined, and, if so, in what manner?*—The first part of this inquiry has been already answered. It has been stated that it is practicable, generally, to localize valvular lesions. The mode in which this may be done is

now to be considered. To refer a murmur to a particular valve or orifice, seems to one unacquainted with the subject, to be a refinement in diagnosis not only difficult, but invested with an air of mystery. The rules, however, are extremely simple; their application is by no means intricate, nor does it require the exercise of any extraordinary skill or tact. The points involved in determining the particular seat of lesions, relate, 1st. To their relations to the heart-sounds; 2d. To the different situations in which murmurs are found to be most intense, and the different directions in which they are farthest propagated; 3d. To the pitch and quality of the murmur; and, 4th. To the condition of the heart-sounds considered in connection with the murmurs. In treating of this branch of the subject, it will be most convenient to consider the murmurs as embraced in two classes, viz: *systolic* and *diastolic*, *i. e.*, accompanying either the first or the second of the heart-sounds. The reader, however, will continue to bear in mind that a systolic murmur may be either an aortic direct, or a mitral regurgitant murmur; and that a diastolic murmur may be either a mitral direct, or an aortic regurgitant murmur. These names, derived from the relations of the murmurs to the different blood-currents which have been described, are extremely useful in fixing these relations in the memory.

"*Localization of Systolic Murmurs.*—In tracing an endocardial murmur to its source, the first point is to ascertain whether it be a systolic or a diastolic murmur. Generally this is unattended with difficulty; but in some instances it is not easy. The difficulty arises from the rapidity of the heart's action. If the heart-sounds recur with great frequency, the systolic and diastolic sounds are not readily distinguishable from each other. The two sounds follow each other so quickly that the difference in duration between the two pauses or intervals is scarcely apparent. Moreover, under these circumstances, the first sound frequently loses its distinctive characters as regards its relative length, quality, and even pitch, and the two sounds become nearly or quite identical. Occasionally the two sounds cannot be discriminated, until the frequency of the ventricular contractions diminishes, or is reduced by certain sedative remedies, such as digitalis, or the veratrum viride. When the two sounds are with difficulty distinguishable from each other, it is, of course, proportionately difficult to determine which of the sounds an existing murmur accompanies. This difficulty, happily, is experienced in only a small proportion of cases. In the few instances in which a

murmur cannot be referred to either sound, the localization of lesions is thereby made with less ease and positiveness. The rules, however, are still measurably available. Whenever the rapid action of the heart does not give rise to difficulty, the different characters as regards length, quality and pitch, which belong to the first or systolic sound, enable the auscultator to distinguish it with readiness. These characters have been already described. If any doubt arise, with the finger upon the pulse of the patient while auscultation is practised, it is easy to determine with which of the two sounds the pulse is synchronous, or nearly so. The sound which occurs synchronously with the pulse is, of course, the systolic sound.

"Assuming that a murmur has been ascertained to be systolic, it may be either a mitral regurgitant or an aortic direct murmur. The question which next arises is, how is it to be traced to the mitral or to the aortic orifice? If it be mitral, its maximum of intensity is at or near the apex of the heart. In some instances it is most intense at the point where the apex-beat is seen, felt, or determined by auscultation. In other instances the intensity is greatest at a little distance to the left of the point of apex-beat. When the latter is the case, the explanation is probably that given by Dr. Sibson, viz: the murmur is somewhat obscured directly over the apex, by the intensity of the first sound, and sometimes by tinnitus. The murmur may be confined within a circumscribed space around the apex. It is generally heard over the body of the heart, within the superficial cardiac region, but with diminished intensity. Above the base of the heart it is often feeble or wanting. It is not propagated into the carotids. If it be transmitted to the upper part of the chest, as is sometimes observed when it is unusually loud, the intensity is much less than over the body and apex, or below the heart. It is often diffused over the left lateral surface of the chest, and may extend to the posterior surface on the left, and sometimes on the right side. When heard on the back, its intensity is greater below than above the spinous ridge of the scapula, the maximum being generally near the lower angle of the scapula. The quality of the murmur may be soft or rough. It is soft in the great majority of cases. Roughness, however, belongs almost exclusively to systolic murmurs. Diastolic murmurs, at least, much more rarely than the systolic, present this quality. It very rarely has a musical intonation in this situation. The pitch varies in different cases, but, as a rule, is neither extremely high nor low. It is rarely as high as the letter R whispered,

and still more rarely as high as S. It is seldom as low as AWE. In the larger number of instances, it is represented by WHO. The mitral valvular element of the first of the heart-sounds is frequently diminished or wanting, leaving the element of impulsion unduly predominant or solely present. The diminution of this element is in proportion to the injury of the valve which the lesions have occasioned, and its absence shows that the valve is nearly or quite useless. The aortic second sound is diminished in intensity in proportion to the amount of blood which regurgitates through the mitral orifice. The pulmonic second sound is thereby rendered relatively more intense, and its intensity is often positively augmented by obstruction to the pulmonary circulation and hypertrophy of the right ventricle.

"The foregoing points distinguish a mitral regurgitant systolic murmur. If, on the other hand, a systolic murmur be an aortic direct murmur, its maximum of intensity is at or above the base of the heart. Its intensity is less over the body of the heart, within the superficial cardiac region, than at the base, and it may be lost in the latter situation. It is still more feeble and is often lost over the apex; and it is very rarely propagated below this point. The particular situation where it is most intense, is usually in the second or third intercostal spaces nigh to the sternum. In the third intercostal space on the left side nigh to the sternum the intensity is, in general, notably less than at the corresponding point on the right side. From the base of the heart it is propagated upwards for a greater or less distance, more so on the right than on the left side. It is often pretty loud at the sternal notch. It is heard in the neck over the carotids. It is sometimes heard on the posterior surface of the chest, and when this is the case its maximum is in the left interscapular space on a level with the spinous ridge of the scapula. It is soon lost below this point. The murmur may be soft or rough, the latter quality being much less frequent than the former. It is, however, oftener rough than a systolic mitral regurgitant murmur. The pitch is usually higher than in the majority of the instances of a mitral regurgitant murmur, often being represented by the letter R, whispered. The pitch, however, varies considerably in different cases. It has a musical intonation oftener than a mitral regurgitant murmur. The aortic second sound of the heart is frequently impaired and may be extinguished, the pulmonic second sound remaining. The extent to which this sound is compromised, will, of course,

correspond to the amount of injury to the aortic valves incident to the lesions which give rise to the murmur.

"As already stated, the two systolic murmurs may be associated in the same case. This fact can generally be determined. The murmurs are rarely identical in quality and pitch; and each murmur has its maximum of intensity in different situations, and conforms to the characters which distinguish, on the one hand, a mitral regurgitant, and on the other hand, an aortic direct murmur. As a rule, the two murmurs in the same case may be localized with as much precision, as when either is present without the other in different cases.

"*Localization of Diastolic Murmurs.*—A murmur having been ascertained to be diastolic, *i. e.*, sustaining a closer relation to the second than to the first sound of the heart, the question to be then settled is, whether it be a mitral direct murmur or an aortic regurgitant murmur. The points involved in this discrimination are less strongly marked than in the case of the systolic murmurs. But in most instances the distinction can be made with proper knowledge and care.

"A mitral direct murmur, as before stated, is strictly speaking pre-systolic. It occurs just before the first or systolic sound, and may be continued into that sound. This is due to the fact that the contraction of the left auricle precedes, by a very short interval, the contraction of the left ventricle, the latter appearing to be a continuation of the former. This is apparent on examining the movements of the heart exposed to view in vivisections practised on animals of large size, and in cases of ectopia. The murmur is usually accompanied by a systolic mitral regurgitant murmur, the same lesions giving rise to both. Its maximum of intensity is over the body or apex of the heart. It is rarely diffused in any direction without the præcordia. It is feeble or not distinguishable at the base of the heart. The murmur is rarely intense, and in the vast majority of cases its quality is soft. The pitch is usually low. It may be represented by the whispered word AWE. The mitral valvular element of the first sound may be more or less impaired, but the aortic second sound (assuming that aortic lesions do not co-exist) preserves its normal intensity. The latter is an important point in discriminating this murmur from an aortic regurgitant murmur. The pulmonic second sound is not only relatively more intense than the aortic in consequence of the diminished intensity of the latter, but is

positively intensified, mitral contraction generally existing when this murmur is present, and, as a consequence, pulmonary congestion and hypertrophy of the right ventricle.

"If the diastolic murmur be an aortic regurgitant murmur, it either replaces or follows more closely upon the second sound than a direct mitral murmur. It is due to the same force which causes the aortic second sound, viz., the recoil of the elastic coat of the aorta, while the mitral direct murmur is produced by the contraction of the left auricle. The former occurs prior to the latter, and hence the corresponding murmur takes precedence in point of time. The intensity of this murmur is not, as is stated by some writers, greatest at the base of the heart, but below, over the body of the organ, nigh to the left margin of the sternum. It is, however, more likely to be heard at the base, in the second intercostal space on the right side of the sternum, than a mitral direct murmur, and this is an important point of distinction. It is generally feeble and very rarely rough in quality. The pitch is usually low. In most instances it is associated with a systolic aortic direct murmur, the same lesions giving rise to both murmurs. The aortic second sound is usually more or less impaired, and in some instances is extinguished. A notable diminution of the intensity of this sound or its extinction, provided neither mitral contraction nor regurgitation co-exists, is proof positive that the diastolic murmur has its source in aortic regurgitation. On the other hand, the integrity of the aortic sound and a diminished intensity of the mitral valvular element of the first sound, constitute hardly less proof that a diastolic murmur is referable to the mitral orifice. Intensification of the pulmonic second sound occurs as a more remote and less constant result than in connection with the lesions which give rise to a mitral direct murmur.

"The two diastolic murmurs may be associated in the same case, but instances of this combination are vastly less frequent than the union of the systolic murmurs. It is, however, as already stated, very common for one or both of the systolic murmurs to be associated with a diastolic murmur. Examples of three murmurs, two systolic and one diastolic, are not very infrequent. Usually, each may be referred to its source. It is not claimed that the rules of localization which have been briefly pointed out are infallible. Exceptional instances will occur in which the source of a murmur is uncertain. But in the great majority of cases it is determinable without much doubt or difficulty. This statement is based on con-

siderable practical experience, and on the analysis of a large number of recorded cases."

The journals contain, occasionally, a case of *rupture* of the heart. The nature of these cases is at present but imperfectly understood. Such an accident, it might be supposed, ought to imply the previous existence of organic lesions, together with their symptoms. Such, however, is not constantly the case. Rupture of the organ has in many instances been observed without the co-existence of any appreciable disease. Nor do the cases on record favor the idea that rupture is very often attributable to unusual muscular exertion. Of thirty-four cases reported in *American Journal of Medical Sciences*, by Dr. Hallowell, of Philadelphia, the accident took place mostly when the patients were in a state of repose.

The following are the remarks of the author :

"Spontaneous rupture of the heart is a lesion of very rare occurrence. It may fairly be doubted if it has ever occurred as a result purely of the violent muscular activity of the organ. In a physical point of view, a broken heart is a poetical license, exclusive of the cases in which the event is dependent on some prior morbid condition of the cardiac parietes. It is an accident incidental to different local affections. In the great majority of cases, it takes place in consequence of softening from fatty degeneration. It may follow extravasation into the muscular substance, constituting the condition called by the French writers apoplexy of the heart, which has been investigated fully by Cruveilhier; great attenuation of the walls in some cases of dilatation ; circumscribed abscess; ulcerative perforation of the endocardium; and softening from inflammation. The seat of rupture, in the vast majority of instances, is the left ventricle, either on the anterior or posterior surface. Statistics differ as to the relative liability of the two surfaces. It has been observed in the auricles as well as in either ventricle. Usually a single opening takes place, varying in size from a very minute aperture to a rent of considerable size ; but instances have been reported of rupture simultaneously at several different points. It occurs oftener in the male than in the female, and almost always at an advanced period of life. The co-existence of hypertrophy or of aortic obstruction favors its occurrence. It may be attributable to some unusual muscular exertion acting as an exciting cause, but in a large proportion of the reported cases, the patients were in a state of repose when it took

place. The only instance of rupture which has fallen under my observation occurred in a patient admitted into the Charity Hospital at New Orleans with delirium tremens. I did not see the patient during life. He died suddenly and unexpectedly, no affection of the heart having been suspected. On examination after death, a rent was found at the upper and anterior part of the right ventricle near the pulmonary artery. The inner layer of muscular fibres was torn over a space wider than the external opening, showing the gradual progress of the disruption from within. The heart was enlarged, weighing a fraction over fourteen ounces. The ventricular walls were not increased in thickness. The right ventricle was covered with fat, and the walls presented both the gross and microscopical characters of advanced fatty degeneration. At certain points, fatty matter appeared to have replaced the greater part of the ventricular walls, the muscular tissue being reduced to a thin layer, not more than a line in thickness. The patient was about sixty-five years of age. The previous history of the case was not ascertained.

"Rupture of the heart is almost inevitably fatal, and death generally follows at once. In some instances, however, life has continued for several hours. The aperture in these instances was quite small, or the escape of blood was retarded by the formation of a coagulum at the point of rupture. A repair of the solution of continuity is perhaps not impossible, although infinitely improbable. Dr. Walshe states that one case has been recorded of death from rupture in which a former rupture was discovered, firmly filled by a fibrinous coagulum adherent to the wall of the heart. The mechanism by which the fatal result is produced has given rise to considerable discussion. Blood is poured into the pericardial sac with more or less rapidity according to the extent of the rupture. But this sac will not contain sufficient liquid for death to be referred to the hemorrhage alone. Paralysis of the heart from the mechanical compression of the accumulation of blood within the pericardial sac is doubtless an important agency.

"Time and opportunity are seldom offered for an investigation with reference to diagnosis. If life be prolonged for some hours, the symptoms are those which denote syncope with præcordial distress, and coma may ensue before dissolution. Happily here, as in other instances in which a positive diagnosis is unattainable, it would not, if attainable, affect the treatment. The indications derived from

the symptoms alone are those which would be furnished by the knowledge of the accident which has occurred. Death occurring suddenly, or a few hours after the sudden development of alarming syncope, in a person advanced in years, who had previously presented evidence of cardiac disease, and especially of fatty degeneration, warrants a strong suspicion of rupture.

"Rupture of the valves of the heart, or of the tendinous cords and papillary muscles, falls more appropriately under the head of valvular lesions than in the present connection.

"In addition to the lesions affecting the walls of the heart, which have been considered in this chapter, there are some others, extremely rare and unattended by any distinctive symptoms or signs, and, therefore, of little interest or importance in a practical point of view. Carcinomatous and tuberculous deposits have been known to extend from beneath the endocardial and pericardial membranes more or less into the muscular substance of the organ. Few organs of the body, however, are more exempt from these heteromorphous formations than the heart. So slight is the probability of their existence in a given individual case, that they are scarcely to be taken into account in the investigation of cardiac affections which are evidently anomalous. The presence of these deposits in other parts of the body may constitute a slight ground for suspicion that they have invaded the heart, if the signs and symptoms show that the organ is affected with some indeterminable form of disease. In this category are to be included extravasation of blood, or cardiac apoplexy, to which allusion has been already made, and cysts containing entozoa."

In concluding our notice of this book, we may say that it goes out to the world as an American specimen in the way of book making. Compared with other books of the kind, it will "pass muster." The style in which it is written, although not very objectionable, would not bear very well an encomium. For example, on page 122, we have the following sentence—the italics are ours:

"Of these three divisions, according to the primary effects of the lesions, the *two first* alone possess much immediate pathological importance."

We might give other examples of the improper use of qualifying words. The author, of course, in the next edition, will look into these matters.

After all, the volume before us is a very creditable production.

It will enhance the reputation which the author already possesses. Its merit consists in bringing within a reasonable compass what is known, at the present day, of diseases of the heart.

Introductory Lectures and Addresses on Medical Subjects. Delivered chiefly before the Medical Classes of the University. By Prof. GEO. B. WOOD. Philadelphia: J. B. Lippencott & Co. 1859.

The lectures of Prof. Wood, on retiring from the labors of theory and practice, will be well received by the alumni of the old and renowned institution in which his professional life has been spent.

The Lectures relate to Pharmacy, Materia Medica, Theory and Practice, and Observations Abroad, etc. There are also contained in the volume Biographical Memoirs of Joseph Parrish, M. D., and Saml. Geo. Morton, M. D.

The Lectures are written in a very smooth, agreeable style. Every where, however, ideas or matter is made to bow in humble submission to manner. The euphony of sentences seems to have been consulted rather than the attempt to give the burly, bristly touch, so that the reader would feel himself gagged if he attempted to pass over them. The author, therefore, it may be inferred, is a polished, but not a forcible writer.

His labors have been extensive, and he has committed the usual error of working in too many departments. His first course o Lectures was on chemistry. He afterwards lectured on Pharmacy f Materia Medica, and finally on Practical Medicine. He has, on the latter two departments, written systematic treatises. On Materia Medica he made his best mark, and neither the world nor he, would have been the worse off if all his energies had been expended in this field. The idea of a man chopping himself up in order to enlighten on different, and, often, very diverse departments, is simply making poor use of his probation on these mundane shores. There is more in any one of the departments than can be mastered by any one specimen of the *genus homo,* it matters not what his gifts are. How much might not Prof. Wood have improved his Pharmacology had his life been exclusively devoted to it. It is a good work, but

he ought not to have been satisfied without having made it the *best* before the profession at the time it was written.

It is, we suppose, generally known that Prof. Wood has now retired from the chair of Theory and Practice in the University of Pennsylvania. In his retirement he takes with him the respect and gratitude of all who have had any connection with him in his official relations. To the graduates of the school he inscribes the volume before us as a memorial of the many agreeable and, he hopes, profitable hours that he has spent with them.

Urinary Deposits. By GOLDING BIRD, M.D., F.R.S. Edited by EDMUND LLOYD BIRKETT, M.D., F.R., C.P., etc., etc. A new American, from the Fifth London edition. Philadelphia: Blanchard & Lea, 1859. pp. 382.

This manual on Urinary Deposits, maintains its popularity, it seems, as well at home as here. It has now reached its *Fifth* edition. The labor of this edition has been assumed, as is seen in the caption, by Dr. Birkett, whose object it has been, to preserve as far as possible the text, on account of the extensive knowledge of the author, his skill in handling his materials, his lucid narrative; and bring the work fully up to the present period. In some instances the new matter is woven into the text; in others it is thrown into notes.

Dr. Birkett records his obligations in preparing the edition before us to Drs. A. Clark, Day, Lehmann, Hassel, Letherby, Johnson, Pavy, and others.

For the commencement of any thing like accurate knowledge on Urinary Pathology, we are indebted to the labors of that sound physicist and accomplished physician, Dr. Prout. Since his time no one has given a greater impulse than Golding Bird. The work before us contains his contributions. It contains, also, the discoveries made since the previous edition was issued.

We have nothing to say of the labors of the late distinguished author. We presume our readers are acquainted with them. If not, they ought to be. What little we have time to notice, will be confined to the additions of new matter.

Among other things we find *two new* acids described as being detected in human urine. These were discovered by Dr. Marcet. The *first* acid "when examined under the microscope appears to

assume the form of oblique rhombohedra, or of prisms derived from that type, aggregating occasionally in stellate groups, but generally branching off from a main crystal or long prism. The crystals transmit readily polarized light, are soluble in ether, alcohol, and boiling water." The *second* is found to solidify in colorless concentric groups of radiating crystals. Generally present in the deposit containing these acids, is a pink sediment regarded by Robin as *urocasine.*

The presence of *lactic* acid in the urine, seems to have been held in doubt by the author of the text. Berzelius in his later days, however, was satisfied of the fact, and so also is Lehmann.

The white deposit, so common in urine after standing a few hours and having generally at first the appearance of minute globules adhering together in linear masses, is not, it seems, urate of *ammonia.* Lehmann, Henritz and Letherby, have determined that it consists of urates of soda, potash, lime, magnesia, and a small quantity of ammonia.

By the text, when *oxalate* of lime is thought to be present from the circumstance of no deposit taking place in the urine after standing a reasonable length of time, we are told to examine the specimen microscopically, when, if present, the characteristic octahedral crystals will be discovered. Other compounds, however, assume the octahedral form, though some of them are so rarely present in urine as scarcely to deserve a notice. The one most likely, from the frequency of its presence, to embarrass the diagnosis, is chloride of sodium. Arsenious acid and protoxide of antimony assume the octahedral form, but of course would rarely be found in urine.

No one during the present, or last century, has imparted more plausibility to explanations of pathology on chemical principles than Leibig. Several of his theories have been adopted by the author of the work before us. Leibig recognized one great cause for the appearance of an excess of uric acid in the urine, founded on his theoretical views of the conversion of this substance into *urea.* He assumed that in the metamorphosis of the tissues, insoluble uric acid is first produced. This is converted, he imagined, into urea under the influence of the oxygen of the blood-discs, "*the oxygen carriers.*" Whatever, now in the shape of disease quickens the circulation, according to this theory, increases relatively the amount of urea to uric acid. Hence, in fever, the phlegmasias, phthisis, etc., the relative amount of urea should be decreased, while in diseases charac-

terized by a slow or feeble circulation, the quantity should be diminished.

This hypothesis it seems is not sustained at all by clinical observation. Lehmann writes, "the pretended oxidation of the constituents of the blood which was supposed to explain phthisis, as well as gout and stone, is not the simple method by which alone specific disease or individual, well characterized processes, can be explained with scientific accuracy. For there are no acute, and but few chronic diseases, in which the oxidation of the constituents of the blood is not diminished or impeded. And again, that there is no disease characterized by a too sudden or rapid oxidation of the blood."

The facts in regard to an excess of uric acid in the urine seem to warrant the inference, of a waste of tissue more rapid than the supply of nitrogenized food; or too great an amount of nitrogen in the food, or obstruction of the cutaneous outlet for nitrogenized excreta. (Bird.)

It should not be forgotten that the presence of uric acid in the urine has quite a close relation to the functions of the skin. Perhaps the most important constituent of urine is uric acid. Calculous formations are largely composed of it; and there exists but few that do not have their neuclei of this salt. "Of 374 calculi in the museum of Guy's Hospital, at one time, the neuclei of 269 were found to be composed of uric acid or urate of ammonia alone."

The treatment for overcoming the uric acid diathesis is not very well understood. Every thing of course calculated to prevent aggregation, or dissolve a stone in the act of growth, would be indicated. The *fons et orrigo* of the calculous diathesis being in the digestive process, a measure of prime importance would be restoring tone to the organs of digestion. Second only in importance to this, if we would judge by a few experiments, would be the exclusion from the food of nitrogenized articles.

Remedies which act as solvents of *uric* acid take a secondary position in the treatment. Soda, potass, and their carbonates, exert a favorable influence, as has been long known, in dissolving calculi, and it may be that their action extends to the neutralizing of uric acid so as to prevent precipitation.

On the authority of Dr. Letheby, the waters of Vichy are spoken of in the work before us as having a well merited reputation in cases of uric acid gravel. This water has been prepared artificially at the

German Spa. at Brighton, and may be procured in pint bottles. It is said that these waters owe their efficacy to the presence of carbonate of soda.

For the present, we must here close our notice of this book. From what has been said, the reader will notice progress in the whole department of urinary pathology. The chemistry of urine is still, it seems, not understood. The white amorphous sediment so commonly described as *urate* of *ammonia*, has very little of this salt in its composition—while the theories of Leibig for the explanation of physiological and pathological processes are one after another being invalidated by observation and clinical experiment. In our review we have just reached the 187th page on which commences the chapter on the clinical *pathology of oxalate and oxalurate of lime*. This is *the* chapter of the volume, the author contributing more original matter to it than to any other. This chapter, we may remark, will constitute the subject of a future notice. In the mean time we may remark that many of its points have been attacked by men of distinguished ability, among whom we may mention Lehmann, Scherer, Bence, Jones, and Rees. The *import* of what Bird denominates *oxaluria*, or the "*oxalate of lime diathesis,*" is to our mind very successfully questioned.

What now of more importance than a knowledge of the urine? By general consent it represents the surplus water of the organism, a large portion of imperfectly assimilated elements of food, and those elements of the disorganization of tissues which can not perform any ulterior process in the economy nor be got rid of by the skin or lungs. A failure of the urine to represent the normal proportions of either the fluids or solids, implies the existence of disease; and the disease may be seated in the kidneys, or in some other organ. The fashion now is to look to the kidneys, for but few of such diseases. Faults in the lungs, skin, and liver; and still more remotely, faults in *primary* and *destructive* assimilation, are regarded as lying mostly at the foundation of urinary troubles.

Urea, uric acid, and no doubt most, if not all, of the solid matters found in the urine, are the result of metamorphosis of the tissues, destructive assimilation. Being no longer of any service in the economy, they are liquified, and in this state enter the circulation. They exist as a consequence in the blood, and the office of the kidneys is simply confined to the process of elimination. The functions of the kidneys being improved, urea and uric acid escape

in small quantities from the blood by the skin. It has also been found, in cases of disease of the kindneys, in copious quantities in the evacuations of the bowels.

PART FOURTH.

EDITORIAL AND MISCELLANEOUS.

The Seceding Medical Students.

In our last issue we referred to the secession, during the present winter, of southern students from the medical colleges of Philadelphia and New York. The number, from the information before us at the time, was set down at *three* hundred. This we soon saw was contradicted, the number being made much less. We *now* see, however, by southern journals, and by a statement made by Dr. McGuire, who took part in the affair, that we were right.

Northern journals, in commenting on this matter, are uniform in the expression of their regrets; and, without being invidious, we may say that we admire the temperate careful tone of the North American Medico-Chirurgical Review, in regard to the incident. It was just what might have, *a priori,* been expected from Prof. Gross. Who, indeed, in the north, could fail to be humiliated in contemplating the existence here of a public sentiment that could give any coloring of propriety to the act of these seceding students? Some of our journals, however, are astonished that politics should be adequate to disturb the harmony of our profession, or endanger, in any way, the progress of its useful and benevolent purposes. They need not be, nor would they be, if the emergencies before us were considered in the light simply of history. We have been told of the medical profession pursuing the "even tenor of its way," irrespective of all extraneous influences. Such talk is simply nonsensical. If our nation was involved in a serious foreign war, there would be, to say the least, an interruption, to a greater or less extent, of every scientific pursuit. Rome was without a medical profession for five hundred years, and who can disconnect this circumstance with her

foreign wars, and the military spirit that overshadowed everything in the empire? Greece engaged in a war with Rome, and thereby lost her arts, her science, her medical profession, and indeed every thing else that could give character to a nation. *Civil* wars, however, are infinitely more to be dreaded. What pursuit or interest could prosper, when brethren are arrayed in mortal strife against each other, when fraternal ties are ignored, and all the restraints removed from the worst passions of human nature? What! a civilization broken to pieces and strewed in fragments over the planet, and still one of the elements of which that civilization is composed "pursue the even tenor of its way?" The supposition is preposterous. If our national organization is to be blotted out, if the ship of State has to be sunk before she has made her first centennial trip, all hope of anything being cultivated on this continent, worthy the attention of enlightened people, is at an end. In the event of such a catastrophe, who can say that we would not forget our letters, our figures, our arts, and return again to our old habit of wearing bearskins? We will not, however, further speculate on the consequences of the event to which we have alluded.

The people of our country are divided in sentiment on the subject of African slavery. Interpreted by what it says and does, it seems to be the intention of a formidable party in the north to cut African slavery up by the roots—abolish it from the Continent. Interpreted by what they say and do, it seems to be the intention of the people of the south to resist this measure. These opposing forces are destined, if judged of by their elements, to come into conflict; and this calamity, in any way contemplated, is thought to be reducible, at last, to the mere matter of time.

In anticipation of such an emergency, what are the duties of the Medical Profession? Shall our journalists at the South follow the example of our cotemporary of the Nashville (Tenn.) Journal of Medicine, who says that the logic that obtains on the subject of slavery with the Abolitionists, is affected with a cancerous ulcer of many years standing; that we have around us a "pestilential atmosphere that has diffused itself and bred maggots," etc., etc.; or shall we follow the example of the journals generally at the North—"Stand still and see the salvation of the Lord?"

Physicians are, as a general rule, physicists. Now this question involving the capacity of races, that the politicians have been concern-

ing themselves with, and about which there are such discrepant views, North and South, is one, the A, B, C's of which never can be understood by any one except the naturalist. The individual that makes out the difference between birds, fishes, reptiles, mammals; and points out from physical characters the sphere each was designed to move in, would be likely to say something sensible on the alleged differentia of the races and the import, socially and intellectually, of these.

Here, then, it would seem, that the Medical Profession might do something in furnishing the data upon which the politicians, both North and South, might reason with some expectation of arriving at the truth.

We have no speculations, as to how our Philadelphia schools will be affected in the future by the "secession." It constitutes no part of our desire to see the number that annually migrate to that medically renowned city, in quest of information, abridged The teachers there deserve to lecture to large classes. Time, however, if we are not disturbed, will increase the growth in the different States of our Confederacy of institutions adequate in all respects to take care of the whole subject of medical education. In the opinion of many, there is no sense, at the present, in leaving many of our Western and Southern States in expectation of superior advantages anywhere else.

But what we are most concerned about, is the danger threatened to the whole profession, by the clouds gathering in our political horizon. The momentous question of the hour is not, how this or that school is to be affected by our sectional troubles, but what is to become of the whole profession.

Valedictory Address to the Medical Graduates of Havard University. By H. Jacob Bigelow, March 2, 1859.

We have received a copy of this address, as we suppose, from its author, but have not had time, heretofore, to notice it.

We agree fully with the author in many of his views; and although his style is verbose, and at times muddy, he nevertheless gets out ideas that are worthy of attention. The fallacy of suppos-

ing that severe habits of industry and scientific research necessarily insure a large and lucrative practice, is well exposed. While no student should think of success in business without fine qualifications, he at the same time should not be inattentive, as scientific men frequently are, to the cultivation of the arts that make life agreeable.

The author takes occasion to ventilate his opinions in this lecture on the Power of Remedies. We have seen some of these opinions before, but we had not, up to the present time, seen their propriety or their use.

New England is famous for good common sense physicians; but it cannot be denied that some of the profession in that region share largely of the speculative tendencies of the population. Homeopathy, as far as we are enabled to judge of the people of New England, by the specimens of that race in Ohio, has taken deep root in the minds of the people. They seem to have just capacity enough to see that there are defects in regular medicine, just like in everything else, but not enough to see that there are fewer here than in any other system. By, therefore, the "fallacy of objections," they are driven away from science, and, with all their vaunted cultivation, they become the dupes of all the humbugs proposed to them; and the most transparent of these, Homeopathy, they like the best. The lecture before us is calculated to be of but little service in remedying this trouble in New England.

Death of Dr. Todd.—We notice, by last news from Europe, the death of *R. B. Todd*, Professor of Physiology in King's College, London. Dr. Todd is well known in this country as one of the ablest Physiologists of the day. *The Physiological Anatomy and Physiology of Man*, a work of some 900 pages is a product of the joint labor of Drs. Todd and Bowman. This work, on every page, shows talent and depth of research. Dr. Todd is also the author of a volume of 270 pages, *Clinical Lectures on Diseases of the Urinary Organs and on Dropsies.*

These works have both been republished in this country. Dr. Todd died Jan. 30, 1860, of *Hamatemesis*, aged 51.

New Journals.—The past year has been prolific in the way of *new* Medical Journals. In our last issue, we noticed the *Kansas City Medical and Surgical Review.* The *Chicago Medical Examiner* has been on our table for some months. Its first number is dated January, 1860. It is edited by Drs. N. S. Davis and E. A. Steele.

We *hear,* also, by our exchanges, of the *Louisville Medical Journal,* edited by Dr. T. W. Colescott.

We have also before us the *St. Joseph Medical Journal,* Missouri, edited by a committee consisting of Wm. J. Heddens, M.D., J. A. Chambers, M.D., and J. B. Scearce, M.D.

Also, the *Medical Journal of North Carolina,* edited by Ed. Warren, M.D.

Also, the *New Orleans Medical News and Hospital Gazette,* edited by D. W. Brickell, M.D., and E. D. Fenner, M.D. The three last have been in existence for some time, and were sent to us, as we suppose, for "*exchange.*"

While upon the subject of journals, we may state that the *Virginia Medical Journal* has taken the State of Maryland under its *wing,* and is now styled the *Virginia and Maryland Medical and Surgical Journal.*

The *Boston Medical and Surgical Journal* has changed editors, Drs. Morland and Minot, who have conducted the work for the last five years, retire, and Drs. F. E. Oliver and Calvin Ellis, assume the editorial control.

Journalism in medicine works sometimes very queerly. As regards *age,* a few only in the country have reached their three score and ten. Many in existence when we commenced our editorial career, which is but a day or two since, have gone to their long homes. If such were allowed to speak again, and were interrogated on the causes of their departure, they would, no doubt, with singular unanimity, exclaim, "rations withheld," "muzzled oxen," etc., etc.

Such being the testimony of the past, is it not a little strange that new enterprises in such numbers are every day being commenced. The circumstance, however, speaks well for the implied hopefulness of journalists that the *genus homo* will be better in the future than it has been in the past. Fain would we join, if it would do any good, in giving tone to the innocent passion.

We wonder if our *delinquent subscribers* will understand what we have been driving at in the above prose?

Since writing the above, we have received the *San Francisco*

Medical Press, edited by E. S. Cooper, A.M., M D., Professor of Anatomy and Surgery in the Medical Department of the University of the Pacific. The number before us (No. 1) contains some very clever original articles. The editorial department is also creditable. We welcome with all our heart this visitor from the Pacific Coast. It hails from a region where there are many things that yet need investigation; and a leading one of its objects, as we see, is to stimulate this.

Prizes for Meritorious Essays offered by the Ohio State Medical Society.—It will be remembered by those who were present at the last meeting of the Ohio State Medical Society, that a committee was appointed to report a plan for the annual and regular distribution of prizes for meritorious essays. A difficulty which that committee and the Society will encounter, relates to the attendant expenditure of money.

A plan, which we embrace this method of suggesting, is to dispense with the publication, in a special volume, of the proceedings. We are prepared for the cold reception that probably awaits this suggestion. A little reflection changes very essentially the aspect of the matter.

A gentleman prepares a paper with much labor, and perhaps with no little expense, which is duly published. Perhaps six hundred copies are ordered, of which from three to five copies are distributed to each paying member. It is thus distributed accordingly to less than two hundred readers, one-fourth of whom have already heard the paper read. As published by the Society, the proof-reading has almost habitually been such as to do serious injustice to the writer.

On the other hand, we have *five* Medical Journals in the State. Two of these publish near a thousand copies each, and represent private interests that must suffer seriously from any neglect in regard to publication. Two others are supposed to have circulations at least several times that of the number of persons entitled to the Society's proceedings. Accordingly, a gentleman submitting a paper to the publishing committee, authorized to negotiate for the publication of it in any one of these Journals, has greater security as to manner of publication, and has it published several times as

extensively as he could have by the Society, all without expense. This need not debar the Society from arranging for extra copies, or the separate publication of a given meritorious essay, though as a general thing that practice is invidious, and should be avoided.

One object had in view by the Society, and a duty devolved upon the committee, is to have the successive volumes of uniform size. In this it has failed. Any gentleman who has a complete set of the proceedings, by comparing them, will perceive that they are as diverse as the phases of the moon.

We have no doubt but a plan can be devised, accordingly, by which the publication will be greatly improved and extended, and the Medical Journals of the State at the same time encouraged and aided, and the Society saved from $100 to $150 dollars annually, as a fund from which to offer prizes for meritorious essays.

H.

School of Clinical Medicine in New York.—We learn from the Peninsular and Independent for January, that at the late annual dinner of the New York society for the relief of widows and orphans of medical men, a prominent topic was the subject of medical education, and the establishment, in the city of New York, of a School of Clinical Medicine.

We are gratified to note the agitation of this subject, and hope that the end of the matter is not yet.

There is no doubt whatever of the abundant resources of that city for clinical purposes. It seems to us equally obvious that those resources are very imperfectly appreciated, and by no means fully developed.

The conduct of its hospitals, dispensaries, &c., is such that few medical students visit the city on account of them, except in the winter time, when everything else is subordinate to the matter of attending lectures, and when six lectures a day, with dissections and anatomical demonstrations at night, require every moment of time. To suppose that, in these circumstances, medical students—a large part of whom are in the first and second years of their studies—can visit the numerous hospitals, dispensaries, private clinics, &c., that go to make up the clinical resources of the city, is simply ridiculous. In fact, from observation made on the ground, we are convinced

that only an exceedingly small proportion of the classes of the institutions of that city pretend to visit, even the leading hospitals, with that regularity and system which are requisite to clinical studies. Many go to the city prominently on account of the hospitals; but very few, however, find the time to visit them.

We have, for many years, accordingly, regarded it as perfectly futile to calculate that students will quit the best institutions of the country, even, in ordinary circumstances, with the requisite familiarity with the varying phases of disease. Their knowledge is essentially elementary, and too frequently they are only imperfectly or partially interested in the study of disease, at the bed side. Hence, to the fullest extent, we are prepared to assent to the suggestion, that a want of the profession, and equally a want of the city of New York, the great emporium of the western continent, is a thorough organization of the profession, for the purpose of giving systematic courses of clinical instruction. Let such an organization include a liberal number of men of the requisite learning and talents, and occupy five or six months of the interval of the lecture seasons, and sooner or later it will tell largely in favor of the institutions of New York, and accomplish a most beneficent work for the profession of medicine, and the cause of humanity. H.

Dr. Ignatius Langer and the Scott County (Iowa) Medical Society —This gentleman, a Hungarian by birth, made his debut as a "national man" at the last meeting of the American Medical Association; presenting to that body a little paper on the "Subcutaneous injection of Medicines generally, and of Sulphas Quiniae especially." The Association generously made him chairman of a committee to continue the investigation of the subject, and report to the next meeting; thus giving the gentleman grounds for the very reasonable and laudable expectation of another national ventilation.

Within the last few months, however, a number of our exchanges, laudably sensational in their proclivities, published certain proceedings of the Scott County (Iowa) Medical Society, expelling the said Dr. Ignatius Langer from its communion and fellowship. These proceedings were forwarded officially by the Society, through its officers, evidently with a view to advertise Dr. Langer, on a scale commen-

surate with his position as a "national man." In this way it was done extensively and thoroughly, thus giving that gentleman a second national airing.

The main point made against Dr. Langer by his confreres, was that he had "made and repeated from day to day certain unwarranted examinations of a pregnant female, previous to the time of labor, with the pretended object of discovering and correcting certain malpositions of the fetus in utero, and of publicly proclaiming the object and intention of his repeated visits to said patient," etc., etc.

It appears that this charge, so far as its main features are concerned, was sustained; and Dr. Ignatius had only enjoyed his national honors for a few weeks, when he found himself suspended by his local society; thus depriving him of his prospective national honors, seriously marring the recollection of the glories of the past, and giving another sad illustration of the painful fact that, after all, there is but a single step, whether towards front or rear, between the sublime and ridiculous.

But, evidently recognizing the magnitude of the interests at stake, Dr. Ignatius writes a lengthy reply to a construction of the charges, to the effect that the Scott County Society had virtually expelled him for resorting to external manipulation for the purpose of effecting the cephalic version. In this reply he gives a copious citation of authorities, to sustain his views and practice; making a lengthy article of seven or eight compact printed pages.

As the attack upon him had been extensively published, he now makes a demand upon editors, in conformity with well settled usage, to allow the medium through which the attack was made to be used for reply. In this way a large number of our exchanges have placed themselves in positions in which they will be supplied with sensation for some time to come. Some have already yielded to their honorable impulses, and are engaged in grinding out large grists of national honors, for "injured innocence."

It is very evident that several serious blunders have been committed in connection with this affair. The first of these was committed by the Scott County Medical Society. We presume that, in the main, its action is right. At all events it is generally safe to respect the action of the regular and accredited organizations of the profession. So far, then, as the charges against Dr. Langer are concerned, and the action of the society, first in his suspension, and

finally in his expulsion, not having the case with its varied incidents before us, and consequently having no knowledge to the contrary, we are disposed to respect its action. But at that point it had done its whole duty; and when it lost sight of this fact, and proceeded to advertise the disgrace it had inflicted upon an unworthy member, it transcended its official prerogatives, and gave occasion for the suspicion, that, after all, the whole affair may possibly have originated in wrong feelings, and unworthy motives. Nor are these suspicions relieved by the occasional allusions, variously made, to Dr. Langer's connection with the American Medical Association.

Another blunder was made by our editorial brethren, in a too ready compliance with the wishes of the society, in giving publicity to its action. These charges were spread out into a couple of printed pages, and were exceedingly rank. We are gratified to believe that our editorial brethren are not so dull as to perceive, in the circumstances, the possibility of mistaken or wrong action on the part of the society; or, that their honorable feelings would not allow such an attack, without admitting a defence. Hence, if Dr. Langer is a gentleman, an injured innocent, as our friends of the New York Press already seem to have concluded, great and irreparable injustice is done him. If he is a knave, the details of the proof belong to a special locality, and the aspect of it presented to Editors is such as to suggest the honorable obligation to allow the reader to hear the defence. Thus, if a knave, even, the opportunity of manufacturing sympathy can scarcely be denied him.

We would very much prefer that the position of the Scott County Society were such that, to the fullest extent, we could sustain it. We are convinced that the profession has much to do in giving tone to its own ranks, by looking after the conduct of its members, and arraigning them when derilect. We are distinctly in favor of holding tight reins, and using the lash on proper occasions, in a suitable manner, and to an appropriate extent. The difficulty in the present case, is that the organized action of the profession loses its moral force, from being overdone. Stopping at the proper point, we have no doubt but the American Medical Association, and all honorable men of the profession, would have been disposed to regard the action had as just, final and satisfactory. By overdoing, suspicions are to some extent aroused, and the opportunity afforded of creating sympathy, which may cause the members of the Scott County So-

ciety some inconvenience ; defeat the laudable purposes which it is supposed they had in view, and discourage the exercise of wholesome discipline in other cases. H.

A Young Physician wishing a Situation.—A young gentleman, graduate of Starling Medical College at its last session, wishes to get a situation with an experienced practitioner. If any one of our readers desire such a connection, or know of any one who does, we shall be pleased to be informed of the fact. Address "Ohio Medical and Surgical Journal, Columbus, Ohio."

Summer Session.—Our summer session will commence on the 4th of April and continue three months. It is designed to elaborate certain subjects more fully than can be done in the regular winter course.

Physicians entrusted with the education of young men for the medical profession, will see at once the propriety of the measure before us. All other things being equal, the student who attends summer lectures will be very much in advance of those who do not.

"A Caricature in Hyperbole.—We clip the following from the *Ohio Medical and Surgical Journal*, being a part of an editorial comment upon the recent stampede of the southern students from the Philadelphia schools. We do so for the purpose of entering our humble protest against its censoriousness and disparaging allegations, which will be echoed, no doubt, by every quack journal in the land; and re-echoed by certain trans-Atlantic critics, who will rejoice over it as furnishing evidence of the utter worthlessness of American medical literature, and this on the authority of our confrere at Columbus, Ohio.

"Our protest is because of its lack of truthfulness, and we take occasion to deny its averments, and affirm that there is no truth in the passages which we have taken the liberty to italicize. We do this that our respected contemporary may have the opportunity to correct or explain, or admit that his hyperbolical assault upon the

whole profession was intended as a caricature, and retract it. Should he fail to do so, we hold ourselves ready to prove, by irrefragable evidence, that, in an evil hour, he has drawn upon his imagination for his facts. We have little patience with the *croakers*, who are ever parading their own deficiencies, as characterizing the whole body of the profession. The fault in the picture is, that it is *not true:*

"'As a *Medical* nation, we have scarcely doffed the swaddlings of infancy. Our institutions of learning are *all*, as yet, in the formative state. We are indeed as sappy as we well can be. *We have no authors on any department of science.* The unthankful business of collecting together the labors of others is the *most* that those of us who have aspired to authorship have *shown ourselves capable of.* As yet we have reared no specimen of the *genus homo* with capacity enough to invent a *maxim or a saying worth recollecting, or that has lived over six months. Our ideas are not only all borrowed, but our words too.* If we wish to say anything forcibly or elegantly, we must quote Solomon, Shakspeare, or the Classics.'"—*Amer. Medical Gazette, New York.*

We have time, as we are just going to press, but for a word of reply. What institutions have we that are out of the *formative* stage? Who are our authors that have attempted anything more than compilation? What have we discovered in Materia Medica, Chemistry, Anatomy, Physiology? What operations have been originated in Surgery? What new disease described? What improvements in treatment? It is admitted on all hands that chemistry and the microscope have been altogether the most prolific of modern improvements in medicine. What contributions from American chemists? American microscopists? We have heard of ether, the oxyhydrogen blow-pipe, Horner's muscle, ovariotomy; but do such things amount to anything in comparison? Are our surgical or obstetrical instruments superior to those of the Saracens? Do we treat the phlegmasiæ or fever more successfully or philosophically than did Hippocrates? Do we know anything more of cancer than did Rhazes? Or have our surgeons improved on the rules of this eminent Arabian, with reference to interference?

We will, just now, ask no more questions. If it pleases the Gazette to let us hear from it on these, we will consider the whole matter then open for discussion, and will embrace the occasion, at some future time, to ventillate a little "on what we are, and what we ain't."

In the mean time, we will say to the Gazette, that we have no disposition to disparage the labors of our countrymen. We claim to be among the stockholders of the capital, if there is any on hand. We have written a volume larger than Sydenham's Practice from direct "observation and experiment," and a good deal more from "second-handed observation." Still we see nothing to found a claim to consideration upon. For twenty years we were in the physician's field of labor with the disposition to investigate, and with the facilities for such a work, but during all this time we never discovered a new truth. We often thought we had, but, on research, we found we had been anticipated by some one else.

We may say, before we lay down our pen, that we were surprised when our attention was called to the Gazette's strictures. They are just such as might have been expected from a Sophomore.

When admiration was expressed of Newton's discoveries, he said: "To myself I seem to have been as a child playing on the sea shore, while the immense ocean of truth lay unexplored before me."—*Ed. Ohio Med. and Surg. Journal.*

The Medical Profession and its Claims.—Prof. James Bryan, of Philadelphia, recently accepted the chair of Anatomy in the New York Medical College. The above is the appropriate title of an address given by him, introductory to the late regular winter course of lectures. Although rather discursive in its character, it is, upon the whole, a most admirable address, evincing liberal erudition, and abundant literary resources, on the part of its accomplished author. H.

"The Rule of Life."—This address, from the pen of our friend Dr. E. Warren, of Edenton, N. C., is published by the Euzelian Society of Wake Forrest College, It aims to sketch "the difference between *self love* and *selfishness*, and to illustrate the peculiar modifications exerted by each upon individual character and social development." We have not been able to give this address such a careful perusal as is necessary to qualify us to decide as to its success, as far as its leading object is concerned. It abounds, however, in beautiful passages, and noble sentiments. H.

A MELANCHOLY CASUALTY.—On Tuesday 31st ult., the wife of Dr. A. C. Castle, while giving some directions to a dressmaker, had her clothes burned from the grate. With great presence of mind she threw herself upon the bed, and wrapped herself up in the quilt; but the crinoline gave vent and space for the fire to burn furiously beneath. She was fearfully burned, and after several hours of intense suffering died.

CLOSURE OF THE FONTANELLES.—Physicians are often questioned about the proper time for the closure of the anterior fontanelle, and it may be difficult for some to answer, since the best anatomists are at variance on this point. We therefore think that it may not be unacceptable to give a summary of some recent observations, by Henri Roger, in the *Union Médicale* for November, 1859.

The researches are based upon the fact, that a cephalic souffle is not heard when the opening is closed by bone.

In three hundred children the anterior fontanelle was never found closed before the age of fifteen months, and never opened after the age of three years.

It must be stated, however, that a distinction is to be made between the clinical and anatomical closure—the first being recognizable during life, the second after death.

In the first case, that is the clinical closure, the size of the opening gradually diminishes, while, at the same time, the membrane becomes thicker until it finally feels like bone. When this takes place, the cephalic souffle is no longer perceptible. The only method of determining the absolute closure by bone, is to examine the dead body. Still, we may assume, that when the fontanelles appear to be closed by ossification, they really are so.

The results arrived at in the manner above mentioned, are as follows: The period of ossification is comprised between the ages of fifteen months and three years and a half. At the first age, the complete change is very rare; at the last, is always found. But these are the extremes. The occlusion generally takes place between the second and third year, and its frequency is regularly progressive from the twentieth to the twenty-third month, increases rapidly after

the second year, and still constantly augments until the age of three and a half years.

Two diseases retard this change—rickets and hydrocephalus; the first by its influence upon the ossific process, the second by its mechanical action. The non-closure of the fontanelles at the usual time may be one of the first manifestations of rickets, and warn us of the approach of the disease.—*Boston Med. and Surg. Journal.*

Chinese Medicine.—The Chinese apothecary prepares roots, barks, leaves, fruits, seeds, resins, oils, alkaline earths, metals, crystals, animal bodies and their several parts, especially their secretions and excretions, into infusions, decoctions, powders, pills, extracts, secret preparations, salves, plasters, etc. The mixtures, decoctions of plants, solutions of salts, etc., acquire, by addition of brown sugar, and of mucous and gelatinous substances, a pretty uniform appearance, and a similar taste. The soluble substances are often prepared before the patient, in an enormous quantity of infusion of tea, and he drinks the medicine and the vehicle in the hot state; the powders are sold in small porcelain and stone jugs, and the stoppers being unscrewed, have on their inner surface a little bone spoon, with which the medicine is drawn out: the pills, which are uniform, and very beautifully rolled and often gilded, are packed in air-tight white transparent wax globes, containing one or two doses. The plasters and salves, usually spread upon red cloth, have a variously-colored paper envelope, written over with explanations and praises of the remedy.

The Chinese divide their remedies into two great classes—namely, those which produce fat, and aphrodisiacs. A large paunch is considered a great title to admiration, and the devotion of this extraordinary people to the fair sex is well known.—*Brit. and For. Med, Chirurg. Review.*

The Doctor at the Helm.—The Veteran Lord Dundonald is now, at the age of eighty-five, writing his autobiography. He relates his exploits with a hearty and sea-man like spirit, which gives surprising interest to the narrative. In describing the dashing capture of a Spanish frigate by this little vessel, the *Speedy*, 158 tons—a

feat which will always be remembered amongst the glories of the English navy, and Lord Dundonald thus refers to the gallant conduct of the late Mr. Guthrie. It is an episode in his life well worthy to be recorded:

"Our rigging being cut up and the *Speedy's* sails riddled with shot, I told the men they mnst either take the frigate or be themselves taken, in which case the Spaniards would give no quarter, whilst a few minutes energetically employed on their part would decide the matter in their own favor. The doctor, Mr. Guthrie—who, I am happy to say, is still living, to peruse this record of his gallantry—volunteered to take the helm. Leaving him, therefore, for the time, both commander and crew of the *Speedy*, the order was given to board, and in a few seconds every man was on the enemy's deck —a feat rendered more easy as the doctor placed the *Speedy* close alongside with admirable skill."—*Lancet.*

Vaccination in Scotland.—At a meeting of the Medico-Chirurgical Society of Edinburgh, on the 18th inst., a paper was read on the subject of small-pox and vaccination, by Dr. Alexanker Wood, and a lengthened discussion ensued, in which Professor Simpson and other leading members of the medical profession in the city took part. All the speakers agreed in expressing unabated confidence in the efficacy of vaccination, if properly and universally performed, in diminishing the frequency of epidemics of smallpox, and in immensely abating their severity and reducing their mortality.—*Med. Times and Gaz.*, Jan. 28, 1860.

Latent Light.—At the last meeting of the British Scientific Association, Sir D. Brewster exhibited a piece of chalcedony, within which a minute landscape could be seen. If kept in total darkness for four hours, this marvelous picture vanished, but reappeared as vivid as ever on ten minutes exposure to the sunlight; proving that not only could a design be mysteriously insinuated into the interior of the mineral, but that light could be stored up therein, and produced at will. It was surmised that this effect had been produced by the action of nitrate of silver.—*Scientific American.*

Arsenical Poisoning by Paper-hangings.—Three children near Tipton, have suffered from the arsenical emanations from a green bedroom paper in a newly-papered house. The symptoms were emaciation, pining, general restlessness, (worse at night,) and twitching of the facial muscles. Dr. Balenden, observing these symptoms, concluded that they were suffering from the effects of gradual poisoning; and, on being removed into another room, the children recovered.—*Lancet*, Feb. 4, 1860.

Chloroform in Obstetrics—By Wm. Pettigreu.—Western Medical and Surgical Society. (*Medical Times and Gazette.*) As a general rule he deprecated its use in ordinary or natural labor, for the following reasons: 1. That the Accoucher should attend solely and strictly to his own avocation, and that it therefore necessitates the presence of a second practitioner. 2. The folly of incurring any risk of asphyxia or death, although such cases in the lying-in room are rare with chloroform in comparison with those in which surgical operations are performed. 3. That under ordinary circumstances where matters are favorable and progress natural, it tends to depress the system, leaving the entire expulsion of the fœtus to the efforts of the uterus, supplied as it is by organic nerves, while the muscles of animal life which so forcibly assist its action are almost paralyzed. 4. By its administration there is danger both to the mother and child. Cases illustrative to these objections were related; the exception to the general rule being, where the mother was of delicate and nervous temperament, and where chloroform was administered in a very modified form, more to attract the attention of the patient from her fears than to lessen the natural throes of labor. In protracted labor the author had experienced much benefit in its administration, and although the pains for the first ten minutes appeared arrested, they afterwards returned more strongly, with greater regularity, and under its use the rigidity relaxed, the mucus became more freely secreted, the countenance of the patient became less anxious, and the pulse quickened at first, became stronger, and the child was born in a very short time. Cases illustrative of the facts were then related. The author, in his limited experience, bore out the observation of Dr. Simpson, that hemorrhage seldom or never occurred after the use of chloroform.

New Method of Extracting Gunpowder from the Skin.—Instead of extracting the particles of gunpowder from the skin, by means of the point of a needle or bistoury. M. Busch applies to the part, a solution of corrosive sublimate, five grains to the ounce. An eczematous eruption is thus excited, and the dried vesicles then contain the grains of gunpowder.

Literary Mortality.—A late French writer of authority, M. de Tapies, gives the following interesting facts in regard to the chances of an author to secure lasting fame. How many there are in our profession whose reputations as writers are ephemeral, and yet, who can say that they have not accomplished something for the advancement of our science, although their works have not floated down the stream of time?

Out of 1,000 published books, 600 never pay the cost of printing, etc., 200 just pay expenses, 100 return a slight profit, and only 100 show a substantial gain. Of these 1,000 books, 650 are forgotten by the end of the year, and 150 more at the end of three years; only 50 survive seven years' publicity. Of the 50,000 publications put forth in the 17th century, hardly more than 50 have a great reputation, and are re-printed. Of the 80,000 works published in the 18th century, posterity has hardly preserved more than were rescued from oblivion in the 17th century. Men have been writing books these 3,000 years, and there are hardly more than 500 writers throughout the globe who have survived the ravages of time and the forgetfulness of man.—*Phila. Med. Rep.*

Another "Black Doctor."—The following is a part of the public advertisement of a negro doctor who resides in the upper part of this city:

"T. Edwards is naturally a Doctor—having a gift from the Lord. My mother was her mother's seventh daughter, and I am her seventh son; my father was a seventh son, and I am his seventh son; I was born with seven cauls, and I am a seven months' child, and walked in seven months after I was born, and have shed my teeth seven times."—*Phila. Med. Rep.*

The following order for a book has been received in this city, and we consider it worthy of record as a specimen of the literature of the "eclectic:"

"I want to trouble you to send Me a Book on the practis. Sence I have quet using callomel in diseases in My nehberhod and dont Bleed I cure it quicker turpentine is as good as callomel on the kidnies and Bile if they dont take coald on it. I can cure fever nagew chills quicker with the eclectic. My partener introdused them from cincinati which he studied one coarse with cellibrated professors of the sistym. We often use tees which is safe except lobelia which has puked too much in My hands. injections are favorite in paines in the bowels Wind and Worms than callomel and safest.

"We Want a nother Book on the sistym But We have 2 now But they dont always tell What the disease is and the deepest principals of the eclectic for the most paticular cases and no other doctor is nier than sixteen miles across. send it By the Barer who is gone to By goods in the east I want the Best Book on the eclectic for I hav quet the old sistym."—*Phila. Med. Rep.*

In the year 1567, the midwives took the following oath in England: "I will not suffer any other bodie's child to be set, brought or laid before any woman delivered of a child, so far forth as I can know and understand, also I will not use any kind of sorcery or incantation, in time of the travail of any woman."

Foreign Intelligence—*Death from Chloroform.*—We regret to have to announce another fatal accident during the administration of chloroform for the purpose of producing anæsthesia in a surgical operation. The unhappy patient was Dr. Renwick, of Alloa, a member of our own profession, and but twenty-seven years of age. His disease was ingrowing of the great-toe nail, which it was proposed to remedy by evulsion. Dr. Renwick had previously inhaled chloroform without any bad result; hence, perhaps, a false sense of security. The circumstances are thus related:

A little of the chloroform was poured upon a towel, and he held it to his mouth with his own hands. After a while, as it did not

seem to be taking any effect, he asked for some more, which Dr. Duncanson at first declined to give; but after a while, finding that no effect was being produced, some more was applied. Observing that he was endeavoring to hasten its effect by strained inspirations, he was asked to breathe naturally, which he did. As it still, however, seemed to be having no effect, another small quantity, at his own request, was applied to the towel, which, after a time, produced insensibility; and, his pulse having been found full and regular, the operation, which did not occupy more than a minute or two, was successfully performed. He still remained under the influence of the anæsthetic, but his breathing was regular, and all was considered right. Some cold water was then thrown on his face to arouse him; but this not having the desired effect, other measures were resorted to, but with a like unfortunate result; and when, after a few minutes, his breathing became less frequent and more labored, and the appearance of his countenance began to change, and his pulse had become nearly imperceptible, serious alarm was felt. Artificial respiration by the modern method was resorted to, and in this manner breathing was kept up for nearly half an hour; but, melancholy to relate, his spirit had passed away.

We are unwilling to add any observations which can give pain, but it is certainly to be lamented that Snow's inhaler, or some other efficient apparatus was not employed. There is some reason to believe that Dr. Renwick was the subject of cardiac disease. The *North British Mail* mentions that some time ago a gentleman died under the influence of chloroform, at Girvan, while undergoing a similar operation.—*Lancet, Jan.* 7, 1860.

The Physician Astronomer.—At a meeting of the Academy of Sciences in Paris, on December 26th, 1859, M. Leverrier made the following interesting communication: Dr. Lescarbault, a medical man in busy practice at Orgères, in the department of the Eure-et-Loire, is also a zealous astronomer, and a man who supplies, by his ingenuity, the deficiency of the means which he possesses for prosecuting his favorite science. In March last, M. Lescarbault observed the passage over the sun's disk of a planet within the orbit of Mercury; and he communicated the fact to M. Leverrier, who had noticed certain perturbations in the motion of Mercury, that, in his

opinion, could only be explained by the presence of another planet. This was in September last; and thereupon M. Leverrier visited him, together with M. Vallée, and had been enabled to confirm the title of M. Lescarbault to the discovery. The correctness of the results obtained by him was the more remarkable on account of the paucity of his instruments. On arriving at Orgères, M. Leverrier found a regular observatory, with instruments, chiefly contrived by the Doctor himself, whose finances were limited. Not having a chronometer, he had made himself a pendulum, striking seconds, by means of an ivory ball and a bit of string. Notwithstanding the clumsiness of his apparatus, the calculations of M. Lescarbault varied less from those of M. Leverrier, than those of the most eminent astronomers sometimes do from each other. For want of paper, Dr. Lescarbault had generally written down his observations with charcoal on a deal board; which, with the Doctor's calculations written on it, was presented to the Academy by M. Leverrier.

The Emperor of the French has conferred on Dr. L. the honorary distinction of Commander of the Legion of Honour.

Exhaustion after Suckling.—Protracted suckling, especially when the supply of milk is scanty, is often followed by extreme exhaustion and debility; with the presence, occasionally, of various anomalous symptoms. A young woman, aged twenty, the mother of two children, is now convalescent, in St. Bartholomew's Hospital after an attack of this kind associated with diarrhœa. She suckled her youngest child for seven months, although the breasts were actually empty. She gradually became much exhausted; she had fits of shivering, with cold sweats at night. Some six weeks before admission, diarrhœa set in, and remained persistent; it stopped two or three times and recurred, and thus assumed an intermittent character. She was ordered four ounces of wine and suitable nourishment, and an aromatic draught containing eight minims of tincture of opium. This had the effect of completely checking the diarrhœa. She has begun to gain flesh, her strength is returning, and she looks quite a different person. She had dysmenorrhœa on November 1st, but it has for the present disappeared.

We select this from a number of instances to illustrate the folly, on the part of mothers, of persisting to suckle their offspring when their breasts have ceased to secrete milk. Many such persons complain, amongst other aliments, of weakness of sight, and, in some instances, temporary amaurosis.—*Lancet*, Dec. 3, 1859.

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PART FIRST.

ORIGINAL COMMUNICATIONS.

Synovitis: a clinical lecture delivered at the Hospital of the Ohio Penitentiary, Jan. 14, 1860, in the presence of the class of Starling Medical College, by J. W. HAMILTON, Professor of Surgery. Reported by T. B. Hamilton, A. B., student of medicine.

I am able to-day, gentlemen, to present you an assemblage of eleven cases of synovitis, implicating all the large articulations except the ilio-femoral, and showing the various modes of origin, stages, incidents, and sequela of the disease. It is scarcely compatible with the circumstances attending an ordinary course of lectures on surgery, to undertake to describe this disease as it effects the various large articulations; and yet it is greatly modified in its incidents, as it implicates different joints. We have so admirable an opportunity of illustrating these varying aspects, that I propose thus to spend the time allotted to our present interview.

This disease is necessarily confined to the diarthroidal, or movable articulations. These only have a proper synovial sac. You are already aware that, in its anatomical and physiological properties, the synovial sac is closely allied to the peritoneum, pleura, and pericardium, being a serous structure, quite abundantly vascu-

lar, highly active in its secretory function, the product being synovia. This product is different from ordinary serum, in containing more albumen, and in being more consistent and viscid, properties which admirably adapt it to the lubrication of the articular surfaces. The sac is variously disposed in different articulations, but, as a general fact, it lines the inner aspect of whatever tissues bound the cavity of the joint, viz: the ligaments, inter-articular fat, articular cartilages, bones and tendons. It is generally spoken of as being a complete shut sac, just as are the bursa mucosa, and the serous sacs above named; but, in so speaking, we are liable to convey a wrong idea. In the fetus, to be sure, the synovial membrane may be demonstrated as being present on all the tissues going to make the wall of the articular cavity. But in the adult, so far as the greater part of the surface of the articular cartilage is concerned, it is only constructively present. It may be demonstrated as present at the circumference of that structure, but toward the centre it seems to have disappeared. It has been suggested that this is caused by the mutual attrition to which, in the exercise of its function, this portion of the articulation is necessarily subjected.

The amount of synovial fluid contained in a healthy joint, at a given time, is slight; merely sufficient to keep its surfaces gliding smoothly upon each other. From very slight or obscure difficulty, however, the balance between secretion and absorption is disturbed occasionally, and we have present an increased amount of fluid, altered in its characters somewhat, becoming less glutinous, and consequently more like ordinary serum. This is *Hydrops Articuli.*

There are a number of considerations, bearing upon this subject, that go far toward explaining the great frequency of the disease. I mention a few. 1. The high organization of these structures, including their high grade of vascularity, and active secretory function. 2. The intimate connection of the synovial structures with others, the mechanical relations or states of which are subject to great and constant variations, as the bones, ligaments and tendons. 3. Their necessary connection with the extremities, and their being generally, in part at least, quite superficially situated, in consequence of which circumstances they are, to a great degree, affected by cold and atmospheric vicissitudes. 4. Their close connection with ligamentous structures, in consequence of which rheumatic, traumatic, or other inflammations of these structures are apt

to implicate them from mere contiguity. 5. A similar contiguous relation to articular cartilage, bone, and periosteum, tissues especially liable to inflammation.

Pathology.—A healthy synovial membrane, in appearance, resembles peritoneum, or any other serous membrane. In a state of health it is colorless, like the healthy conjunctiva. Becoming inflamed, it assumes a high degree of redness, just as does the inflamed mucus membrane of the eye. Very soon the contained synovia is increased in quantity, and vitiated in character. It loses its transparency, and assumes varying degrees of redness from that which is slight to that which is intense. At this stage the effusion of very red serum, in increased quantity, occurs. The disease persisting this becomes admixed with flakes of lymph, and at a still more advanced stage the contents of the sac frequently become distinctly purulent.

On yesterday I had an experience in private practice illustrative of this statement. Some weeks ago a boy of nine years, previously healthy, had an attack of acute ostitis, implicating nearly half of the upper portion of the tibia, excluding the epiphysis. Extensive acute necrosis, suppuration, implication of soft parts, and formation of sinuses, rapidly supervened. Some of these latter extended upwards on the outer aspect of the knee joint, to a point over the outer condyloid ridge of the femur. Others burrowed extensively toward the popliteal space. The synovial capsule of the articulation was distended with fluid, and even presented distinct signs of pointing on its inner aspect. The articular surfaces were apparently forced asunder; the ham strings were tense, and the limb was strongly inclined to assume such a degree of flexion, as to render a greater or less degree of dislocation imminent. Under the circumstances a free incision was made where the fluid was most superficial. This was followed by an abundant discharge of deeply red serum, in which floated many small, and some very large flakes of lymph. In the outset the discharge consisted mainly of this colored serum; next came the lymph, the relative proportion of which increased with the flow, and gradually changing its characters, so that that which escaped last was not to be distinguished from pus.

Sooner or later, suppuration persisting, the articular cartilage becomes softened, perhaps loosened, disintegrated by ulceration, or even separated in minute sequestra, by the same process. In ad-

dition to this, changes occur in the structure of the synovial sac itself. The most common of these is thickening from deposition of lymph. From what we know in reference to this thickening as it occurs in other serous sacs, as the pleura, we would be lead to expect that the deposit of lymph would occur in the inner aspect of the membrane, tending to produce coalescence of the opposed surfaces, and result in anchylosis. This is the fact, however, only as an exception. The deposit is usually on the exterior of the membrane, and may be so abundant as to increase its thickness many times.

Symptomatology.—It is no part of my present intention to present more than the striking or chracteristic features of this disease. That we may properly appreciate these, it is of the first importance that we familiarize ourselves with its pathology, and the special anatomy of the articulations. There is, as you will already have inferred, increase of size—swelling. The presence of fluid in the sac, and thickening in the membrane, with infiltration of the superjacent tissues, is a sufficient explanation of it. There is alteration in the *shape* of the limb at the articulation. Swelling, in fact, implies an altered condition of the limb; but I have reference here to certain characteristic changes, modified by the circumstances of each articulation. To exemplify, take the knee joint. The synovial sac is covered over, and bounded in certain directions, by bone; in others, covered in strongly by tendons and ligaments. On each side of the ligamentum patella, and also of the tendon of the quadriceps extensor, the sac is only covered by skin, cellular tissue, &c. The sac being strongly distended with fluid, and yielding to this distending force, in these circumstances, will necessarily produce an elastic and fluctuating swelling on each side of these tendons. Now, when it is borne in mind that the sac is reflected over the anterior aspect of the articular surface of the femur, extending upwards a considerable but variable distance, beneath the tendon of the quadriceps extensor, it will be readily seen, that in a recent case of synovitis of this articulation, where the membrane, ligaments, &c., have undergone but little change, a certain well-defined and characteristic alteration of shape is inevitable. Carefully analyzed, it will be seen to consist of a tense swelling on each side of the ligamentum patella, one on each side of the tendon of the quadriceps, and one beneath that

muscle extending an inch or two upwards. The points between which fluctuation is present, become at once obvious.

A thorough knowledge of the special anatomy of each articulation, will enable you to see that each articulation, in the presence of an ordinary attack of synovitis, has necessary changes of shape, depending upon the physical disposition of the various structures going to constitute it. In the median line of the ankle joint, you have anteriorly, in close connection with the synovial sac, the tendons of the anterior tibial group of muscles; laterally, the maleoli and lateral ligaments, and posteriorly the tendo-achillis. Now, you see, in this physical arrangement of the parts about the articulation, abundant reason for our not having fluctuating swellings at these several points. In the absence of these strong and inelastic parts, and the presence of comparatively thin and elastic strata, we see sufficient cause for elastic and fluctuating swellings at intermediate points. In the elbow joint, the swelling occurs at the sides of the articulation, and beside and beneath the tendon of the triceps. In the wrist joint, the sac is so bound down by the numerous tendons, lodged in grooves, and the abundant ligamentous arrangement, that, in the presence of synovitis, it can scarcely be said to have a characteristic shape. The hip and shoulder joints are so deeply imbedded in capsular muscles, that the alterations of shape, although necessarily quite definite and considerable in character, are yet more or less difficult of recognition.

These remarks in regard to change of shape apply more particularly to those cases in which the membrane is not greatly altered in thickness, and in which there is but little alteration of the parts external to the sac. Alterations of shape, depending upon these exterior deposits, are, of course, very various, both as to kind and degree. They are more particularly characteristic of advanced stages or chronic conditions of the ordinary cases, and of a class of cases, as the gouty and rheumatic, which have their origin in these exterior tissues, and only implicate the synovial structure secondarily.

Now, all these alterations of shape, except in the hip joint, are exemplified, in a marked degree, by the cases before you. In all, except one, the alteration of shape is so characteristic as not to call for particular remarks.

You have in one of the cases, that of this man R., an alteration of shape of the knee joint, equally as great as in any of the others,

but it is not so characteristic. He has had inflammation of this joint for many years. Putting my fingers on opposite sides of the ligamatum patella, I find fluid there; but you notice it does not make a distinct, puffy elevation, in these situations. Furthermore, the impression made to the touch, is not that of fluid covered by a thin stratum of elastic tissues; but rather that of a collection deeply buried by a thick stratum of non-elastic tissue; and this is undoubtedly the fact. From frequent relapses of inflammation, the synovial membrane is no doubt greatly thickened, while external to it, in the ligaments, tendons, cellular and other tissues, there is effusion. Effusion of what? It is not serum. We have neither acute nor chronic edema, such as the mere effusion of serum into the cells of the cellular membrane would produce. It is effusion of lymph into the various tissues just named. This lymph has produced change in all the structures about the joint, and is of so permanent a character as to lead me to suppose that this man will never have a right knee, which, either as to shape or usefulness, will be like the left.

Another feature, well illustrated in the cases before us, is the various *modes of origin* of synovitis. In the greater part of these cases, the disease seems to have been the result of atmospheric vicissitudes or alternations of temperature. It may originate in general atmospheric vicissitudes, independently of rheumatism on the rheumatic diathesis, as a frequent, but perhaps exceptional occurrence. More frequently, when it thus originates, the inflammatory attack is primarily in the fibrous tissues, merely extending to the synovial structures incidentally. In all the cases before you, which seem to have thus originated, you observe that the effusion, and that which I have called the characteristic swelling, are of moderate size. When the disease is caused by a more direct and powerful exposure, in the absence of the rheumatic or gouty diathesis, it commences primarily in the synovial membrane, and is apt to present the characteristic symptoms in a marked degree. This is what we ordinarily imply by "synovitis" where the word is used without qualification. It frequently has a traumatic origin, as in two of the cases before you. This man, a fine specimen of good health, stepped from a car in motion, producing that peculiar and obscure kind of subcutaneous injury, which we call a "sprain," in the tissues about the inner aspect of the knee joint. The injured tissues inflaming, the inflammation gradually extended to the syno-

vial sac. In the other case, a man who has a slight syphilitic taint, inflicted a small incised wound in the skin, &c., about the head of the tibia, where the bone has but very slight covering of soft parts. As is apt to be the case with wounds in such situations, it became inflamed. This inflammation gradually extended to the synovial sac. At present you notice we have the characteristic appearance of the knee, with free purulent discharge from the wound. By pressing six inches above this cut, you see that I force this pus from that point. In the third of these cases, of traumatic origin, the cut was severe, entering the cavity of the articulation. Grave symptoms followed, as is usually the case when the disease is thus caused.

An exceedingly important aspect of this subject, the sequelae of synovitis, remains for consideration, and is well illustrated in several cases now before you, adduced with special reference to the illustrations of the ordinary and leading effects of the disease. In this case of old synovitis, already recurred to, we have an altered shape of the limb, with a great degree of weakness and stiffness. In this case, originating in contusion and strain of the tissues about the inner aspect of the knee joint, we have contraction of the muscles, a degree of gliding of the articular surfaces on each other, a partial dislocation, and the leg immovably flexed to an angle of about 70 degrees. This man's case presents the sequel in a case caused by an incised wound entering the cavity of the knee joint. There is nearly immovable anchylosis. Yet, I wish to impress it on your minds, that the mere fact of an incised wound entering the knee joint, is not necessarily followed by grave symptoms and anchylosis. Two years ago, a convict in this institution, in using an adz, made a wound two inches in length, which laid the knee joint open freely, the cavity of which was filled with blood. A thorough emptying of the joint, with a careful adjustment of the wound, secured union by the first intention, and a perfect limb. There is one sequel not exemplified in the cases before us, which I wish to mention, i. e., dislocation. I suppose that this is rarely, if ever, exemplified, as complete dislocation, except in the hip joint. It is a universally recognized fact, that, in morbus coxarius, the destruction of the acetabulum and head of the femur may be such as to allow dislocation of the femur from external causes so slight that the occurrence may be called spontaneous. That dislocation may be caused by synovitis, from the synovial sac becoming excessively

distended with fluid, with little or no destruction of the hard structures entering into the constitution of the joint, is equally a fact, though it is, perhaps, by no means generally recognized. Brodie gives the case of a boy who was attacked with well marked synovitis about the first of October, 1824. For several weeks he suffered severely with the ordinary symptoms, after which there was a general subsidence of the disease, without external discharge. Against the following March, he was able to get about with the assistance of crutches, but it was now discovered that the limb was too short. In the following November Brodie made a careful examination, and found the hip dislocated, upwards and outwards.

Brodie's next case was that of a girl who was seized with an attack of what was supposed at first to be rheumatic fever. In the course of two or three days this fever was excessive. She laid in a state of delirium for several days, during which time the hip trouble was measurably overlooked. After a rapid and severe siege, in which she came very near dying, the case took a turn, and she recovered. To the surprise of her friends, the hip was now found to be greatly distorted. Brodie examined her under these circumstances, and found the head of the bone on the dorsum of the illeum.

This eminent authority alludes to several other similar cases.

Since the commencement of the present course of lectures I was kept for a number of days, with my venerable friend, the well-known Dr. Boerstler of Lancaster, at Logan, Hocking county, as witness in a case of prosecution for alleged mal-practice. The circumstances in which the prosecution originated were as follows: A boy fell in a barn, coming in contact with a round pole which laid on the floor, and impinged on the outer aspect of the left thigh, opposite to the trochanter minor. Two competent surgeons, Drs. Huffman and Pullen, saw him a few hours after the accident, made an examination which, in most respects, was thorough and careful, and came to the conclusion that there was no dislocation but a severely contused condition of the parts about the joint. They directed appropriate treatment, and gave a careful prognosis, in which they expressed the apprehension that the case might be attended with some difficulty to the articulation. This examination did not include measurements, but only a comparison of the length of one side with the other. Grave symptoms, referable to the seat of injury, followed. Some days after the reception of the injury, Dr. Dalton, the senior of the firm, and an able surgeon,

saw the case, and made the ordinary measurements with extraordinary care. He found no difference between the two sides. After a few months of appropriate treatment, the active symptoms subsided, and the attendance of the surgeons was discontinued. Not long afterwards, Dr. Davis, an intelligent physician, saw the boy, made an examination that convinced him that the limb was dislocated, and defended that opinion before the court. At the time of the trial the limb was shortened to the extent of two and a half inches.

It was maintained by the witnesses for the plaintiff, that here was dislocation, and that, inasmuch as there had been no external discharge, no evidence of the destruction of the head of the femur and acetabulum, the dislocation must have been primary, and consequently its being overlooked was the result of the want of ordinary skill and diligence. It was distinctly assumed that there having been no suppuration or external discharge, and consequently no proof of a destructive process implicating the joint, there was no sufficient cause for a secondary dislocation, and that it could not, even as a possibility, occur.

The witnesses sustaining the defence claimed that the examinations made by the attending surgeons, and especially the measurements made by Dr. Dalton, amounted to positive demonstration, as showing the absence, at that time, of the deformity and shortening present at the time of trial, and amounted to most satisfactory proof that a dislocation, of whatever kind, or to whatever degree, could not have been present at the time the examinations were made. The case turned, to a very great degree, upon the question of the possibility of the occurrence of secondary dislocation, without suppuration and other external indications of disorganization.

The witnesses were kept on the ground two or three days before the case was reached. Two of them being thus detained at a public house, noticed that the landlord, a very intelligent gentleman, limped, and had a deformity very much like that of the boy around whose case so much interest centered. They requested and obtained permission to make an examination, and found the most satisfactory proofs of a dislocation, upwards and backwards, of the femur. The following history was obtained :

Ten years previously, after a severe day's exertion, the gentleman had what was supposed to be rheumatism in the left hip joint. This subsided at the end of three or four days, after which, for a year, he was quite well. At the end of this time, he had difficulty

in the same articulation. This was severe enough to confine him to his bed for four weeks. At the end of this time he commenced to move about on crutches, but was still conscious of great weakness and tenderness about the joint. After a few weeks more he became distinctly conscious of a giving way about the joint, after which the leg was too short. Mark the point. This gentleman was the patient of the two worthy gentlemen who took the lead in *the advocacy of the impossibility of dislocation without external discharge.* The verdict was for the defence.

Flexion, with complete or partial anchylosis, as a sequel, deserves at least a mention. In two of the cases before you it is exemplified. In one of these cases we have rigid anchylosis, in the other it is present to a moderate degree.

It has been my object, on this occasion, to improve the cases before you in the way of exemplifying the characteristic alterations of shape, the various modes of origin, and the sequela of synovitis. I have discussed its pathology more particularly with reference to making these things plain. It is no part of my intention to enter into the details of treatment, and yet I wish to say a little in reference to the pinciples involved in that aspect of the subject. And, in the outset, there is a marked difference as to what you may expect, either as the result of treatment, or from the unaided efforts of nature, in an acute or recent case, as compared with a chronic or old one. The principle involved in this difference, has already been discussed in another connection. I operated on a case of hydrocele before you a few days since. The operation consisted in drawing a large quantity of straw-colored serum from the tunica vaginalis, throwing in a quantity of tincture of iodine, and allowing it to escape. Three days after the operation, the tunica vaginalis contained as much serum as ever. Ten days later this was absorbed, and the man was well. In this case, by our operation, we got rid of a quantity of serum, effused as the result of a passive process, and by applying an irritant to the surface of the sack aroused a high grade of action, which resulted in the effusion of a quantity of serum, the result of this *active* process. Now we gained this: serum, effused in this passive and chronic way, is but very slightly amenable to absorption. That effused actively, is amenable to absorption in a high degree. Now, apply this pathological principle to the case in hand. If a serous collection in a joint, however abundant, is recent, and the result of ac-

tive disease, you may promise yourselves an easy task in getting rid of it. If it is abundant, or even moderate, has been present a long time, and there is an absence of the ordinary indications of activity in the state of the parts, it is by no means safe to calculate on getting rid of it, without the lapse of a good deal of time. The same principle is illustrated in the facility with which we get rid of effusions in acute peritonitis or pleuritis, and the difficulty with which we effect the same in ascites or hydrothorax.

Again: A case of synovitis having become thoroughly chronic, what is the prospect of complete success in the accomplishment of a cure? To apprise you of the difficulties attending this stage of these cases it is only necessary to remind you of the pathological anatomy of the parts as I have just given it. The main difficulty is not now in the fact that fluid is present, and that this collection has resulted from a passive effusion; or even that it is a purulent fluid, which does not readily admit of absorption. The chief obstacle to a cure is now found in the circumstance that the sac is greatly distended and thickened; that the surrounding cellular tissue and ligaments have undergone alteration from deposition and organization of lymph; and that all these parts are liable to be elongated, or relaxed and enfeebled. A complete recovery, accordingly, can only be expected after the lapse of a good deal of time. In this pathological condition, furthermore, you will at once recognize the demand for the exercise of pressure by the use of the bandage or otherwise; the internal and local use of iodine and mercury; and the external use of counter-irritation, either in the form of vesication or pustulation.

I would like to present the details of treatment appropriate to the various stages and varieties of the disease, but the limits of the present interview oblige me to defer this part of the subject to some other occasion.

Diphtherite. By A. S. Clark.

This is a disease of late origin, or, at least, we do not have any account of it as a distinct disease prior to 1771. Dr. Bard, of New York, writing in that year, describes a false membrane similar to that which is found in croup. In his description he discards the notion of ulceration or gangrene, which was spoken of by previous

authors on the subject of sore throat, believing these ulcerations, when they occur, to be complications of other diseases, or that they were mistaken, it being nothing but white exudation of coagulable lymph. We hear nothing more said about it until about the year 1826, when Bretonneau wrote a treatise on Diphtherite, in which he says, that it is not attended with ulceration or gangrene, but is closely identified, in every respect, with croup. Since his time the disease has been described by many French writers. This disease appeared in France and prevailed as an epidemic in 1855–6–7, during which a great number died. The recoveries were attended with extreme debility. I now come to the epidemic which has been described in this country during the last two years. It first attracted general attention in England, of late years, in the autumn of 1857 and summer of 1858, during which time it visited many towns, and since then has prevailed in very many parts.

In this country there has been a very general prevalence of this disease during the last two years, prevailing as an epidemic, and, in certain localities, it has been very fatal.

It is peculiar in its mode of attack, differing in almost every case, but having in the main, well-marked characters that will distinguish it from other diseases. Commencing usually with uneasiness in the fauces, and pain on swallowing, gastric irritation, which frequently produces vomiting, disturbance of the hepatic functions, and a disturbed circulation. Sometimes the first symptoms are hoarseness with altered tone of voice, not much swelling, but immediately an effusion of plastic lymph upon the mucus coat of the larynx and fauces, which becomes organized, spreading to the air passages, developing low fever, with a weak and quick pulse, hurried breathing, ending in death by asphyxia, the same as in pseudo membranous croup. The majority of cases have a more insidious attack with a more favorable termination. The first that attracts the patient's notice is pain on deglutition. On examining the throat you find slight congestion with considerable redness; here it may terminate by acrid secretions relieving the congestion, but generally in a very short time one or both tonsils become very much inflamed, sometimes with swelling of the carotid, cervical, and submaxillary glands. Swallowing now becomes very painful. The tonsils and fauces have the appearance of indentation, looking like pits made by wheat kernels, showing that the mucus coat has become thickened in patches which, with the effused lymph, gives it the appearance of ragged ulcers or gangrenous sloughs. This exu-

dation at first is of tough, elastic, white or whitish yellow shreds of membrane, but as the disease progresses or becomes more malignant, it changes its color and becomes darker, with effusion of sanguino-purulent matter, and fetid breath, with the tonsils and fauces of a dark ash hue. This exudation, which is muco-sanguino-fibrinous, spreads into the air passages of the head giving a very offensive odor and increasing the danger of the patient, making convalescence very slow.

Occasionally we have fever from the first symptoms of the disease, but not usually until the local inflammation of the throat has developed itself.

The fever is of a low and malignant form—it may be sthenic in some, and is, at the commencement, but does not remain so long, soon assumes the asthenic or typhoid character.

The blood is changed in relation to the normal proportion of its constituents, having less fibrin and a tendency to disorganization. Hence the frequent occurrence of epistaxis and sanguineous effusion.

The nervous system is very deeply implicated, with general prostration, of the whole system, which is the greatest danger of this disease. The stomach is often disturbed in the commencement, inducing emesis. Constipation of the bowels generally occurs, except when they are disturbed by the acrid secretions of the throat, which produce diarrhea.

During the inflammatory process of the throat, there is hypersecretion of the mucus coat, commingling with the lymph effused thereby relieving the loaded vessels and preventing ulceration.

The secretions are acrid in their character, producing excoriations upon any surface that they come in contact with.

The urine is acid, scanty, and in latter stages frequently entirely suppressed, followed by anasarca, and requires to be strictly attended to throughout the whole treatment of this disease.

This is no doubt a blood disease, which develops its virulent poison upon the mucus coat of the throat and air passages, producing in those predisposed a pseudo-membranous exudation, in others inflammatory swellings of the tonsils and glands about the neck, depressing the vital system as well as the nervous. The virulence of the poison is such that it has a tendency to lessen the plasticity of the blood, (by which its nutrition is destroyed) which is seen by not coagulating, becoming less in fibrin and deficient in

red corpuscles, producing malignant asthenic inflammation, depressing the whole system, causing the muscles to lose their tonicity, becoming flabby and less cohesive, which may be accounted for in part by the poison inducing the disease, and in part by difficult respiration, thereby not relieving the blood of the waste material of the organized system, by arterialization which remains as a poison. The febrile disturbance is generally slight. Pain is not in proportion to other symptoms; sometimes quite absent, the voice dull and nasal, moderate thirst and loss of appetite. It does not specially attack the puny and ill-fed, but is generally confined to those under 18 or 20 years of age.

I am indebted to Dr. W. F. Clark for some valuable information on diphtherite. He and his partner, Dr. Buchanan, have treated near five hundred cases (some of which I saw) in an epidemic of this disease, occurring at Lowell, Washington co., Ohio, commencing in June and ending in December of the year 1859, in which they lost about 40 patients. About one-third of the five hundred cases were of a very mild character. He states that they lost every case where the false membrane became perfectly organized, dying in from one to two days. The convalescence of those that recovered was usually from seven to twenty-one days, unless a relapse occurred, which was very common, making convalescence in some three months.

The appearance of the tonsils, fauces, &c., accords with the description given. Bowels constipated, nervous system prostrated, toward the close of the disease, secretions generally acid. Epistaxis with the blood not coagulable, but remaining watery, and in fact the solids and fluids in a septic condition, in all the malignant cases. The sweat and urine were decidedly acid, and in fatal cases there was frequently an entire suppression of the urine.

In those dying by suffocation from the false membrane, there was little or no swelling, not much fever, it being sympathetic or secondary. He (Dr. Clark) thinks that it is contagious, especially during an epidemic. One thing I observed in the cases that I saw of that epidemic, and that was in nearly all cases of a malignant kind which lingered or not, there was ulceration and gangrene with sloughing of the fauces and other parts of the throat, and many patients were mortified before they breathed their last. Any external wound or abrasion of any surface was immediately followed by gangrene.

Treatment will depend upon our knowledge of the pathology of the disease. To counteract and eliminate the poison of the blood, sustain the patient, excite secretion, and equalize the circulation, are the main indications.

In mild cases little general treatment is required. The patient may take a dose of sulphate of magnesia, or some other saline cathartic, and use alum gargle. In somewhat severer cases repeat the cathartic with ipecac, and use a mixture of chlorate of potash and lemon syrup, and in addition to alum use diluted Mur. Tr. Ferri as a gargle. It has been recommended to use glycerine in false membrane as a solvent, which is very good; but I think that carb. potash is better. You are debarred from blood letting and tracheotomy on account of the nature of the disease producing aenemia in one case, and gangrene in the other.

When you have high grade of inflammation, a full, strong pulse, with high fever, some would recommend bleeding; but it is found that venesection does not exercise the same controlling influence over inflammations of the mucus coat as over other organs, and especially in this disease; it does not relieve the tendency to plastic effusions; and again, this disease early assumes the malignant type, by a depraved state of the blood, which is shown by the dark hue and fetid odor of the exudation; therefore, it is better not to bleed or deplete too much.

At first you may give an active cathartic, and that of a character that will stimulate the secretions, and at the same time not depress the vital powers,—calomel and ipecac, combined with carb. ammonia and soda, followed, if necessary, with Rochelle salts, or any of the saline cathartics, with the free use of chlorate of potash, sesqui chloride of iron in tr., diluted with nitrous ether. The preparation of potash that I prefer is:

℞ Chlorate of Potash ʒj.
Syrup Lemons.
Aqua *aa* ℥iv.
Sulp. Morphia gr. ij m.

Dose, table spoonful every 4 or 5 hours.

And use a gargle of the Mur. Tr. Ferri, diluted with nitrous ether; also given in full doses, three or four times a day, as a tonic and diuretic, together with soda and potash, which have a tendency to dissolve the coagulated lymph, and keep the throat clean. It will be necessary to use expectorants, ipecac and opium, remember-

ing to sustain the patient by iron spoken of, quinine and ammonia, with proper diet, without regard to the inflammation—or, in other words, use constitutional treatment. You must counteract the poison in the blood by the chlorate of potash, and eliminate from the system, through the kidneys and pores of the skin, by the above diuretics and diaphoretics. I do not think that the free use of calomel, by small doses, is beneficial; but the saline cathartics, soda, potash, and chlorates, should be freely used.

For local treatment, use means to divert the blood from the inflamed part, and to equalize circulation by sinapisms to the legs, feet, and hands or arms, external stimulants to the neck, and, as the disease advances, fomentations of hops, poultices, &c. Internally, to the throat, apply the tr. of iron, nit. silver, sulphate copper, alum and oak bark, or tannin. In advanced stages apply the nitrate of silver or sulphate of copper as a caustic, and between the caustic applications use glycerine, for its lubricating as well as for its solvent powers.

The lancet, leeches and blisters, in malignant cases, are not to be thought of, but in their stead use Peruvian bark, or quinine, wine-whey, carbonate of ammonia and animal broths, with fresh air, good nursing, and you may expect that nine out of ten cases will recover.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

Mortality in Trades and Professions. Shocking Picture of the White Slaves in England.

In the current number of the *Edinburgh Review* we find a very interesting article on the effect of the various industrial professions in England upon the health and longevity of those engaged in them, which gives at the same time a picture of the condition of hundreds of thousands of the working classes of England which, if they were only negroes and some thousands of miles away, would excite the special horror of all the dutchesses and antiquated lords in the realm. The article informs us that the grinders of Sheffield cutlery suffer so much injury from the constant inhalation of the par-

ticles of steel and of silicious grit that the average duration of life among them is twenty-nine years! Less than half the scripture period allotted to the duration of human life. The amount of this dust given off in the process of grinding cutlery may be imagined, when it is stated that a dozen razors, weighing two pounds four ounces, lose, in grinding, five ounces, and the stone itself, seven inches in diameter, is reduced to six.

In the rough nomenclature of the trade, the disease which thus early destroys the fashioner of forks and needles is termed the *grinder's rot.* The lung, when examined after death, looks as though it had been dipped in ink, and the texture, instead of exhibiting the usual spongy character of that organ when in health, cuts like a piece of india-rubber. The color and the solidification of the dry grinder's lung is owing to the chronic inflammation to which it has been subjected by the presence, from an early age, of irritating particles of steel and stone within its finest air-passages. But why dry grain at all, the reader will involuntarily exclaim, if the wages of the occupation are death? The grinder replies that there are certain operations which cannot be done on the wet stone; giving the rounded back to razors, technically called "humping," and the rounded side to scissors are quoted as examples. Then again, we may ask, where is the necessity for this rounded form—would the shaver on a cold morning care a jot whether his razor had a round or a square back? Would the lady, as she manipulated her lace-work with her scissors hesitate to accept a three-sided scissor's leg in place of a half round one, if she knew that the difference involved the life of a fellow-creature? Yet such trifling differences as these, between round and flat, stand in the way of the health or misery of an entire class of workers.

But the most revolting picture of the wholesale physical deterioration of masses of men, in which a life of unnatural toil, that twists the sinews until the individual is distorted out of all semblance of humanity, is terminated by a premature death, is that given of the miners—a proportion of which we here reproduce:

THE MINERS OF ENGLAND.—There are at present upwards of 300,000 human beings acting the part of gnomes for the good of the community at large, entering day by day into the bowels of the earth, and emerging in the evening. Of human life they see as little as the train of black ants we watch emerging from their holes in the ground. Yet the miner is the industrial Atlas of England. Without the coal and iron, the copper and the tin, they toilfully evoke from vast depths, England would be but a third rate power.

Let us take the collier, for example. In many pits in the west of England the seams of coal are not more than twenty or twenty-five inches in thickness; and inasmuch as the object of the worker is to remove the coal with as little as possible of the surrounding soil, he often drives his working to a considerable distance through an aperature not more than, and often not so much as, two feet high.

If our adult male reader will condescend to squat himself on the floor, *a la Turque*, say, under the dining table, for instance, and then picture to himself the inconvenience of picking with an axe the under side of the table for twelve hours, he will obtain some slight idea of the muscular knot in to which the poor collier has to tie himself for the whole term of his working life, having to use violent exercise throughout. Can it be wondered at, that under such circumstances, the Apollo-like form of man becomes permanently twisted and bent, like the gnarled root of an oak that has been doubled up in the fissure of some rock? If we look at a collier we see instantly that his back is curved, his legs bowed, and the extensor muscles of his calves withered through long disease. He has knotted himself so long that the erect position of the race becomes a punishment to him. It is credibly related that a number of colliers having been sentenced to imprisonment in Wakefield jail, with hard labor, the only complaint they made was, that they were obliged, whilst at work, to keep the ordinary posture of rational creatures. But confined space is only one of the many evil conditions under which they labor. In the majority of cases the collier works in foul air; for, notwithstanding all the official inspection, the ventilation of mines is still execrable. The fire-damp either blasts him into a cinder, or the choke-damp noiselessly blots out his life. However good, moreover, the general system of ventilation in a mine, unforeseen accidents will happen at any moment. The pick of the collier strikes into the gallery of an old pit, where carbonic acid gas has been gathering perhaps for a century; and the poisoned air rushes in and does its work in an instant; or a sudden invasion of carburetted hydrogen disengaged by a fall of a mass of coal, meets the miner, who is working, perhaps, imprudently, with a naked candle, and an explosion follows, which crowds the pit mouth with a wailing multitude of newly made widows and orphans.

Upwards of 1,000 lives are annually lost, principally through these causes, and not less than 10,000 accidents in the same period testify to the dangerous nature of the miner's occupation, notwithstanding the strict government inspection. It is humiliating to know that England is yet far behind continental nations in her methods of preventing these dreadful catastrophies. Mr. Mackworth, in his lecture at the Society of Arts stated that the mortality from accidents in the coal mines was—

	KILLED.		PERSONS.	
Prussia...........................	1.89	per	1,000	per annum.
Belgium...........................	2.8	"	1,000	"
England...........................	4.5	"	1,000	"
Staffordshire.....................	7.3	"	1,000	"

This comparison, so humiliating to England, cannot be explained by the superior adventure of our countrymen, inasmuch as the production of coal in Belgium is half as much again per acre of the coal-field as in England.

In addition to his cramped condition, whilst at work, his supply

of oxygen is small; for in all probability the air supplied to him has to circulate many miles through the mine, and to pass over the excrementitious deposits of man and horse, and the decaying wood work of the mine, ere it finally reaches him, in enfeebled streams, in his solitary working dell. Long deprivation of solar light, again, tends to impoverish his blood, to blanch him, in short, like vegetable products similarly deprived of the light of the day. It is through the lungs, however, that the health of the miner is principally attacked. The air of a coal mine—such as it is—holds a vast amount of coal dust in mechanical suspension, and this, as a matter of course, is constantly passing into the lungs of the miner. The proof of this is the so-called "black spit" of the collier, which, on being subjected to the microscope, is found to consist of mucus, filled with finely divided particles of coal. The permanent inhalation of such an atmosphere results in what is termed the "black lung." The breathing apparatus of the collier becomes clogged, in short, with coal dust, and after death it has the appearance of being dipped in ink. A writer, who has lately investigated this singular pathological condition, thus gives his experience of two post-mortem examinations:

"In each case the black treacly fluid obtained by thus cutting the various portions of the lung (more especially the posterior and inferior portion of the lower lobes), and by slitting up the bronchial tubes, was evaporated to dryness, and the residuum being broken up and subjected to a red heat in a porcelain tube retort, behaved precisely as coal under similar circumstances, *i. e.* it evolved a smoke-like gaseous product, which, on being slightly condensed, deposited hydrosulphate of ammonium and coal tar, and being thus purified, burnt in all respects like the well-known compounds of the two carbides of hydrogen (common gas)."

When mines are driven to any considerable depth the temperature proportionably increases, and 80 degrees of Fahrenheit is a common temperature at the end of workings all the year round. After exposure to this oppressive atmosphere during the whole day, the collier perhaps suddenly emerges into the open air at the pit's mouth, vitally depressed by his prolonged exertion, when the bitter wind is shaving the surface of the earth at a temperature much below the freezing point.

The metalliferous mines, such as the tin and copper mines of Cornwall, and lead mines of Derbyshire, are in pretty much the same pestiferous condition, but in one particular they are still more destructive of life than coal mines. In the latter the tired workman is lifted from the depths of the mines to the surface by a rope. The Cornwall miner, on the other hand, has to carry his exhausted body in some cases thousands of feet up a series of steep ladders to the mouth of the mine. It has been estimated that many miners have thus to make an exertion every night equal to climbing to the summit of Cader Idris, and this is an up-cast shaft used for the extraction of the foul air!—*N. Y. Mentor.*

A Substitute for the Trephine, with Remarks on the Treatment of Injuries of the Skull. By MIDDLETON GOLDSMITH, M. D, Professor of Surgery in the Kentucky School of Medicine, Louisville, Ky.

Every surgeon who has used the trephine much in the treatment of injuries of the skull, has often regretted the loss of so much sound bone as the use of that instrument involves in order to apply the elevator or to take away pieces of broken and detached bone. It is true, that by the use of Hey's saw, the object may be obtained in many instances without the sacrifice of much unbroken bone. But it is within the experience of every surgeon that he has often been obliged to sacrifice a quantity of sound bone greater than that for the removal or elevation of which the operation was undertaken.

In order to avoid this serious objection to the trephine, the writer has for the last ten years been in the habit of using a *chisel in place of the former instrument.* In employing the chisel the great object is the conservation of bone. The trephine must unavoidably take more than half its button from the unbroken calvarium. With a saw the surgeon must of necessity make his incision in a line that is nearly straight, and he cannot limit it in length. In order to prepare the calvarium for the application of any kind of saw, the periosteum has to be detached from a space much larger than that corresponding with the line or circle of the incision. Now it often happens that, when room has been acquired for grasping the fragment with forceps, the fragment cannot be extracted because it is held by a single or by several angles, or by a narrow projecting edge of the external table. With a chisel, impelled by the hand or a small hammer, just so much bone may be removed as is necessary for the insertion of the elevator, or for the extraction of the detached pieces, and no more. The dura mater is not endangered in the operation, for the depressed bone protects it. It is never necessary to cut any part of the internal table, for if the opening in the external table is as large as the fracture of the internal table, then the external opening is large enough to allow the required extraction.

If the reader will fracture, with the face of a hammer, the skull of any of the larger inferior animals, and with a half-inch carpenter's chisel undertake to make room for elevating bone and removing fragments, the many advantages of the instrument will at once be apparent to him, and that, too, in a manner more forcible and satisfactory than any account which the writer can give. The operation does not admit of a formal description, for the variations in size, shape, degree of depression, and difference between the fracture of the internal and that of the external table, are so great that no description can be given except in a given case, and then the formula would be appropriate to that case alone.

The writer has not used the trephine in fractures of the calvarium for the last ten years. He has always been able to effect the

objects of the operation with the chisel as the sole cutting instrument applied to the bone. He has had occasion to use it in many instances, in private and hospital practice, and so manifest are the advantages derived from it as compared with the trephine, that he believes it has very generally been adopted by his pupils and professional acquaintances, and he feels firmly convinced that any surgeon who will once try it will afterwards adopt it.

The mere loss of bone, every surgeon will admit, is, of itself, a very serious evil when recovery from the immediate effects of the operation has occurred. But this is not all. The trephine cannot be applied to the complete division of the bone without injury to the dura mater, and that, too, to an extent not commonly recognized by operators. The membrane is scratched more or less by the teeth of the saw, and although in skillful hands the abrasion is not deep, nevertheless the injury done participates with other things in exciting that which is always to be dreaded—inflammation of the meninges.

The edge of the button hole often necroses, ("It is rare that exfoliation does not take place from the edges of the cut bone, or from the circle made by the trephine." Guthrie, *On Injuries of the Head*, p. 96, 97,) and thus the presence of the sequestrum keeps up constant irritation and discharge, and maintains that open state of the parts which renders them liable to inflammation. The division of the bone by a sharp cutting instrument, like the chisel, inflicts no other injury on the bone. Necrosis is not so apt to follow, the parts heal quickly, and thus the important and sensitive organs beneath are not so long exposed to the contact and the influence of the air.

In the next place, the writer has uniformly practiced the immediate and perfect closure of the wound in the scalp.

It is hardly necessary at the present day to enter into any detailed array of cases to show that a greater degree of mortality attends upon compound fracture, that is, fracture of the skull with wound of the scalp, than upon fracture without such wound. The belief that such is the case finds expression in the practical precepts of almost every surgical authority, if, indeed, it is not stated in round terms. GUTHRIE says:

A simple fissure or fracture of the skull is of no more importance than a fracture of any other bone in the body, unless it implicates the brain, and should be managed according to the same principles of surgery. * * * Mr. Abernethy was the first to declare in this country, that a simple fracture of the skull should always be left to the efforts of nature, unless urgent symptoms were present requiring relief. Sir A. Cooper was the first to insist, in modern times, that if the scalp or integuments of the head were undivided down to the bone, they should not be interfered with; and that although a fracture might be suspected, its existence should not be ascertained, unless symptoms rendered it necessary.

Velpeau (Velpeau, A. M. L., *De l'Operation du Trepan dans les Plaies de Tete.* Paris, 1834,) has published on this point some

observations made by F. Martel, of Lyons, in 1601, which deserve to be recorded, as they show that the light of truth did break in on our predecessors when it might not have been expected. Martel says: "A wound in the integuments ought not to be made to expose the bone on the suspicion of its being fractured; for I say, that a simple fracture of the head may be cured without its being seen, and the less wounds of the head are exposed to the air the better. I repeat, that a simple fissure, without a wound in the integuments, gets well by the aid of nature alone, and that if the bone does not press on the dura mater there is no use in exposing it; and when the bone is deprived of its integuments the sooner it is covered over the better." He recommends for dressing only water or oil.

If the integuments or scalp should be divided, and bone fissured, the same principle should be carried out, by endeavoring to procure the union of the divided parts, as was done during the war in all such injuries from sabre cuts as did not penetrate the skull—a practice that was found to be eminently successful even when union did not take place.—*Guthrie on Injuries of the Head*, p. 52, 58.

Sir Astley Cooper has stated, in his Lectures on Surgery, that there is a great difference as to the danger of inflammation and suppuration of the membranes of the brain between those cases in which the fracture and depression is complicated with a wound of the scalp, and those in which the soft parts are uninjured; such mischief being much more liable to occur in cases of the first kind than in those of the second; and on these grounds he recommends that, where the complication exists, *we should not hesitate to apply the trephine;* and on the other hand that, where it does not exist, we should carefully abstain from adding to the injury, by dividing the scalp and exposing the fracture. * *—*Medico-Chirurgical Review*, p. 115.

The conversion of a simple fracture into a compound one, and the removal of any portion of the cranium, are serious proceedings. * * *—*Ibid*, p. 348.

Miller (*Practice of Surgery*, p. 61,) holds to the propriety of non-interference in fracture without symptoms of compression.

South, Sir A. Cooper, Abernethy, and Drasi, (Chelius, *System of Surgery*, p. 432, note,) clearly avow the opinion that in fracture without scalp-wound no incision should be practiced, unless the symptoms of compression are urgent. This opinion is founded on the idea that the open state of the fracture, *i. e.*, the exposure of the broken bone and the dura mater to the air, renders them liable to inflammation. Indeed, the practical precept which they inculcate is nothing more than the vicarious expression, as it were, of this truth. It cannot be construed in any other way. It cannot be held that the incision of the scalp, *per se*, contributes to the causation of inflammation; this is controverted by every days' experience. Nor, can it be held that the removal or elevation of the bone inflicts any serious injury; it, rather, by the removal of pres-

sure, abstracts one of the causes of inflammation. The man from whose skull a piece of depressed bone has been removed by an operation, is *minus* one cause of inflammation, the depressed bone —and *plus* one, the scalp wound. If the latter were not the more efficient cause, the practical precept would be absurd.

No one has more clearly pointed out and proven the agency of the air in the production of inflammation than Mr. Paget, in his lectures on Surgical Pathology. It is the vital principle of subcutaneous surgery; most modern surgeons recognize it in their directions for the closure of ordinary wounds; and it seems strange that the practical precept growing out of it has not as yet been so clearly pronounced in the injuries of the head—a class of injuries in which this agent produces more disastrous results than it does in any other.

It is true, we are told to close the wound in the scalp with adhesive plaster; but every surgeon who has had occasion to trephine much, knows that the wounded structures cannot be brought together and kept in apposition by adhesive plaster, above all when the crucial incision has been practiced. A well-founded prejudice exists against the ordinary thread suture. It is seldom used. Hence, in the great majority of cases, if not, indeed, in all, the wound is not closed in the sense in which wounds are closed in order to produce immediate union of the parts.

Close approximation, if not always immediate union, can be procured by the use of metallic sutures. The writer used formerly suture pins, but has latterly employed the silver or iron wire. The sutures are to be placed so near each other as to secure as close contact between the parts as is secured in the operation for vesico-vaginal fistula. It may not always be best, as in those cases where blood continues to ooze from the divided bone and soft parts, to include the whole extent of the wound, but the major part of it should always be closed at once.

The shape of the wound materially influences the ease of coaptation. The crucial wound is the most difficult of all to close; for, besides its shape, the angles of the flaps overhang the breach in the skull, and for lack of support on their inner surface fall asunder. Hence, it is always better to make the external wound of such a shape that the perfect closure of it will be as easy as possible. The surgeon often finds the scalp injured in such a manner that all he can do is to extend the wound; but, then, the incision should have no angles over the breach of the bone. If a cut is required at an angle to the line of the wound, the angle should commence at the extremity, not the middle of that line. A single flap will thus almost always suffice.

When there is no scalp wound, or when the latter is small, then the surgeon should make a semi-circular flap large enough to embrace the breach of bone, and to extend from one-half to three-quarters of an inch beyond it. The edge of the incision will thus have a substantial support, and will not come apart by falling into the depression of the breach. The writer is disposed to place

great stress upon this point in the management of these cases. It is true that he has not yet seen that number of cases which, if related, would be enough to establish a general rule to the satisfaction of others; but still he has seen enough to satisfy him that the safety of the patient is vested more in the exclusion of the atmosphere from contact with the dura mater than in any other thing and in any other circumstance in the whole operation of trephining. In confirmation of this, he would state that since he adopted this practice he has never lost a patient whom he has trephined before inflammation occurred, and in whom the brain or dura mater was not torn. He cannot now recall all of the cases in which he has had occasion to operate in the last ten years of his practice; but he feels confident that in that period he has operated at least twenty times in the kind of cases specified. He does not mean to be understood as stating that perfect closure of the wound gives immunity from inflammation, but that, so far, he has lost by inflammation no patient thus treated, and that his experience most decidedly establishes in his mind the importance of the measure.

The writer's colleague, Dr. Hardin, Professor of Obstetrics in the Kentucky School of Medicine, has operated in some seven or eight cases, including those which he reported in the *Western Journal of Medicine* for 1851 or 1852. In all of the cases he says that, according to Velpeau's direction, he so managed the incision into the scalp that the line of the scalp wound should not overlie that of the fracture, and he did this chiefly by adopting the semi-circular incision. He also practiced the immediate closure of the wound in all of these cases, and he reports that he has not lost a single case. Something of this success is doubtless attributable, in his practice as in that of the writer, to the fact that most of the cases were in rural districts. But this also is noticeable, that the two parties, acting without concert, and in distant parts of the Union when most of their operations were performed, should have been led, the one by one train of reasoning, and the other by another, to a practice substantially alike in purpose and closely accordant in results. These results the writer fears are too good to last; for it were absurd to hope that any modification of the operation, or subsequent treatment, can strip the injury entirely of its danger.

Another and important point to be attended to is the preservation of the pericranium, and this to the end that new bone may be produced. Not only is the pericranium to be preserved, but it should be preserved in connection with the scalp as far as possible. If the wound in the scalp reaches to the pericranium, the line of that wound should be the place where the detachment should be begun, either for the application of the chisel or for the removal of loose pieces. The pieces should be pressed upon and otherwise examined, in order to determine the necessity of removal, and if they are loose and require removal, then the pericranium should be dissected carefully from them—not scraped off—*and raised with the scalp.* This advice is based upon the fact that in the adult the pericranium

participates more largely in the production of bone than the dura mater. The latter, as shown in Rodier's recent experiments, takes but little part in the regeneration of bone, and, on theoretical grounds, if we are to look hopefully for the restoration of lost bone, we are to look for it through the agency of the pericranium chiefly. That large pieces of the calvarium may be produced, is shown by the occasional results of sabre slices of different portions of the vertex. Fractures and depressed pieces of bone might much oftener be saved were it not the fact that the external table in the fragment is often detached more or less from the internal table. The inner table thus separated from the outer, and detached also from the dura mater, as it almost always is, by the injuring force—or its connection with the dura mater being feeble at best, and affording little circulation—will probably necrose if allowed to remain. But the removal of the inner table of course involves the removal of the outer, so that fragments of the latter, which might be saved but for this circumstance, have to be sacrificed. These considerations have to do with the question of removal or elevation.

In the young subject, in which the dura mater is proverbial for the strength of its attachment to the inner table, and for the freedom of its vascular connexion therewith, the inner table is not detached in fracture of the calvarium. Hence, in young subjects we almost universally elevate. Elevation does not require, nor do we practice, the removal of the pericranium, or even the scalp over the whole of the fractured portion; and, hence, among other things, the comparative innocuousness of such injuries in the young.

These several facts, as well as the observation of the results of injuries requiring operations, have led the writer by degrees to remove more of the fractured pieces of the inner table in the adult, until now he makes it his general rule to extract from under the shelving edge of the external table all such pieces of the inner as can be detached with the forceps, and to restrict the act of elevation to fragments of the external table alone.

Since the publication of Rodier's experiments in this country, in the early part of 1859, the writer has had occasion to trephine in three instances. In the first, occurring in March, 1859, some fragments of the temporal and parietal bones, just above and behind the ear, were removed from the head of a negro boy. The breach was about the size of a silver dollar. The periosteum of the fragments was carefully raised in the flaps. The cutting part of the operation on the bone was made with the chisel; the irregularly shaped flaps were closed throughout with silver sutures thickly inserted, and the line of the scalp wound was covered with scraped lint and a moderate compress. The flaps adhered throughout their whole extent by the "first intention." The scraped lint was not detached for ten days. There was not a single symptom of injury during the whole time the boy was under observation—and on examining him to-day, February 4th, 1860, the whole breach of the bone has been filled with new bone.

In the second case, that of a negro man, from whom large portions of the temporal and parietal bones were removed in October last, in all leaving a breach as large as the palm of the hand, a considerable portion of bone has been re-produced. The writer has not seen the patient, but this is the report which has been made to him. In this case it was not possible to close the wound completely, on account of the blood which continued to ooze from it; and, to provide for this, a small opening was left at the inferior portion of the wounded scalp, but below the line of fracture.

The third and last case was that of a young man operated on in the presence of the class in the Louisville Hospital. He had been struck with the edge of a shovel upon the median line of the forehead. A linear depressed and comminuted fracture resulted. In this case a considerable piece of the os frontis was extracted, the way for its escape having been prepared by the chisel, and a part of the depressed bone was elevated. The longitudinal sinus was opened by the injury, and the oozing of blood from this rendered it impracticable to close the wound in all its extent. He left the hospital at the end of three weeks, or thereabouts, but since his return to the city, I learn from his medical attendant, Dr. Forsyth, that some small pieces of broken bone have been discharged, and the case is therefore still under treatment.

In conclusion, the writer would be glad if any of his former pupils, or his medical friends who have heard his lectures on the foregoing topics, or who have had occasion to see him make the operation according to the precepts here laid down, would, on seeing this paper, communicate to this Journal their own experience in the matter.—*Louisville Medical Journal.*

Three Cases of Funis Presentation treated successfully by the Posture Method. By S. Brandeis, M.D., Louisville, Ky.

Case I.—Mrs. Katharina Rehm, aged thirty, a native of Germany, and who has borne four children (one of which was stillborn in consequence of prolapse of the funis), was seized with her fifth labor on the first day of July, 1858, at four o'clock A.M. At five o'clock the membranes ruptured, followed by a full gush of liquor amnii, which carried forward with it a long loop of the funis and the right hand. The midwife in attendance, having discovered the mischief, sent immediately for my assistance.

I reached the patient within ten minutes, and found the funis, feebly pulsating, outside of the genitals, the hand within, and the head balloting high above the entrance of the pelvis. Remembering a plan suggested by Dr. Thomas of New York, I forthwith placed the parturient on her knees and elbows, supporting the body with pillows in such a way that the pelvis was a good deel higher than the chest.

With slow and careful manipulations I succeeded in replacing both funis and arm far beyond the head, while I kept my hand within the cavity of the womb in order to prevent a further prolapse. Strong labor pains set in, and, soon after, the head engaged so firmly in the superior entrance of the pelvis that all apprehension of a procedentia of the funis vanished. The patient was now placed on her back, labor proceeded rapidly, and three-quarters of an hour later a living child (a boy) was born.

The patient did very well afterwards. The placenta was spontaneously expelled, there was very little after-pain, and recovery took place rapidly. The child is now eighteen months old, vigorous and healthy.

Case II.—Mrs. Katherine Rapp, aged thirty-six, a native of Germany, a stout and healthy woman, and the mother of four children, was taken with labor pains at eight o'clock P. M., October 12th, 1859. Soon after the arrival of the midwife the membranes ruptured, and a loop of the funis and the hand presented. I was summoned to the case at 11 o'clock P. M. On examination I found the midwife's diagnosis correct; the hand was the left one; the loop of the funis, still pulsating, was about three inches long; whilst the head was high above the entrance of the pelvis. The method described in Case I, was immediately carrried into operation. The reposition of the parts prolapsed was accomplished in about ten minutes. Labor pains were rather slow for about three-quarters of an hour, and the patient, having been very much fatigued by her uncomfortable posture, was permitted to lie on the left side with a high pillow under the hips. The pulsation of the child's heart, which had been very feeble, now recovered its full strength, labor pains reappeared, the head engaged firmly in the pelvis, no further prolapsus occurred, and, at half-past twelve, a loud crying child (a boy, eleven pounds in weight) made its appearance. Childbed proceeded without the least disturbance. The child is now four months old.

Case III.—Mrs. Elizabeth Bohn, aged thirty-six, native of Germany, of vigorous frame, but somewhat reduced by a bronchial catarrh which persisted during the later months of gestation, sent for a midwife at eleven P. M., February 3d, 1860. The pains were so slow and feeble that patient and midwife slept several hours during the night. At five o'clock A. M., contractions of the womb reappeared more forcibly, the membrane ruptured; after which the midwife discovered the funis projecting through the os uteri, but could not find any fœtal part presenting. My assistance was called for at seven o'clock A. M., February 4th, 1860.

On examination, I found the funis in from four to five small loops projecting through the os uteri, which was only partially dilated; the head being high above the pelvis, I could discover only by introducing my full hand.

After placing the patient in the position already described, efforts were made to replace the funis, which was more difficult in this case than in the two former, as several loops were projecting,

and one would drop down while another was carried up; but nevertheless the aim was accomplished in a very short time, and the operating hand kept within the uterus in order to prevent another prolapsus. In the meantime, uterine contractions propelled the head into the pelvis. The patient was now placed once more on her back (to her great comfort), and auscultation soon convinced me of the child's life.

Labor proceeded rapidly, and at a quarter-past eight A. M., one hour after my arrival, a crying child proclaimed to me once more the success of the operation.

The patient had some after-pains, which yielded to slight medication. She is now doing well.

A few remarks on the merits of the operation employed in the cases just reported, will be permitted.

The presentation or rather the prolapsus of the funis, is by all authorities in the art of accouchment considered as a complication most disastrous to the life of the fœtus, and the great variety of contrivances invented for the occurrence is the most eloquent testimony for the difficulty of its removal.

The space granted to this paper does not permit the reporter, nor is it his aim to go into a detail of the various modes of treatment; but it may be remarked, that not only the life of the fœtus, but the life as well as health of the mother is often endangered or lost through the severe operations—forceps, version and craniotomy—often resorted to, after repeated efforts have failed to replace the funis. The following table, collected from the highest authorities, shows the numerical proportion of this occurrence:

Collins,	16,152	cases of labor.	97	funis presentation.	1	out of	165
Churchill,	90,983	"	322	"	1	"	282
Michaelis,	2,400	"	27	"	1	"	88
Boivin,	20,357	"	38	"	1	"	535
LaChapelle,	15,652	"	41	"	1	"	411
Hardy and McClintock,	6,702	"	37	"	1	"	181
Klein,	5,490	"	55	"	1	"	100
Barstch,	4,425	"	16	"	1	"	276
Arneth,	6,608	"	33	"	1	"	200
Skanzoni,	8,415	"	29	"	1	"	290

Out of 177,184 accouchments, which is the total amount of the figures just referred to, prolapsus of the funis occurred 695 times, giving a proportion of one 1 : 264, showing that this anomaly is one of the most frequent disturbances of labor.

Another table will show the relative mortality of children born under these circumstances:

	PROLAPSUS OF FUNIS.	CHILDREN STILL BORN.
Mauriceau,	39	15
De La Motte,	14	5
Clarke,	66	49
Collins,	97	24
Churchill,	322	220
Hardy and McClintock,	37	25

	PROLAPSUS OF FUNIS.	CHILDREN STILL-BORN.
La Chapelle,	41	8
Michaelis,	27	20
Boivin,	38	18
Arneth,	33	11
Skanzoni,	29	13
	743	408

Thus 743 cases of prolapsus funis gave 408 still-born children, a proportion of 1 : 1.82, which shows clearly enough that accoucheurs have not been very successful in treating this kind of labor.

The rationale of the posture method being obvious to every skillful practitioner, we shall, in conclusion, try to give the indications for it.

First. The operation is only admissible as long as circulation exists in the funis; even if the circulation is feeble, it may soon be restored after the impediment is removed.

Second. The os uteri must be sufficiently dilated or dilatable.

Third. The liquor amnii must be partly retained; otherwise, if it should all have escaped, and the uterus be firmly contracted over the child's body, every effort for the reduction of the prolapsed funis would be in vain.—*Louisville Med. Jour.*

On the Mental Peculiarities and Mental Disorders of Childhood. By Charles West, M. D., Physician to the Hospital for Sick Children.

Gentlemen—Those of us who have been for some years engaged in the practice of medicine, must be aware of important changes which time has wrought, not only in our powers of observation, but also in the objects to which those powers are directed, and that we now watch minutely many things which, in days past, we were wont to pass by almost without notice. At first, and for a time, we studied diseases, the changes which they wrought in the frame, the symptoms which gave token of their presence, and we did well. We found, however, that in spite of all our care, we often fell into error, especially in the opinion we formed of the probable issue of the case; that according to the different individualities of our patients, the same disease ran an unlike course; that it was widely modified by the habits, occupation, disposition of the sick person; that if we were to avoid mistake, our prognosis and our treatment must often vary, in accordance with other rules than those which can alone be laid down in nosologies. We no longer studied diseases only—we studied the diseased.

The importance of this two-fold study is not equally recognized by all, and hence it happens that the most successful practitioner of medicine (successful, I mean in a far higher sense than that of being he who makes the largest income,) is by no means always

the man of highest scientific attainments, but often the one who, though otherwise inferior, has a more genial character, a livelier sympathy with his fellows; qualities which not merely enhance the personal regard of his patients, but which greatly heighten the real value of his opinions, and lead him, not infrequently, to right conclusions, even when he is unable to assign perfectly satisfactory reasons for them, either to himself or to others.

The strongly-marked individuality of the adult gives constant occasion for the exercise of these qualities, and even they who are the least possessed of them cannot fail to perceive their importance. In the case of children, however, individuality is far less marked; its influence, therefore, is too often practically ignored, the mental and moral peculiarities of childhood are little thought of, and disease in early life is often looked on as though its course were altogether undisturbed by those influences which in the grown person are recognized by all as having a large share in conducting the patient to death, or in bringing about his recovery.

It is, I think, worth while to look at the child from its mental as well as from its physical side; to see how in its immaturity the mind re-acts on the body as well as body on the mind, and to take a hasty glance at the mental peculiarities and mental disorders of childhood.

No one can have watched the sick-bed of the child without being struck by the almost unvarying patience with which its illness is borne, and the extremity of peril from which, apparently in consequence of that patience, a complete recovery takes place. Much, indeed, is no doubt due to the activity of the reparative powers in early life, but much also to the unruffled quiet of the mind. No sorrow for the past, no gloomy foreboding of the future, no remorse, disappointment, nor anxiety depresses the spirits, and enfeebles the vital powers. The prospect of death, even when its approch is realized, and this is not so rare as some may imagine, brings in general but small alarm; it may be from the vagueness of the child's ideas; it may be as the poet says, that in his short life's journey, "the heaven that lies about us in our infancy" has been so much within him, that he recognizes again more clearly than we can do—

> " * * * the glories he hath known,
> And that imperial palace whence he came."

I refer to this, gentlemen, because the truth is one which has its practical side; because to keep the sick child happy, to remove from it all avoidable causes of alarm, of suffering, of discomfort, to modify our treatment so as to escape a possible struggle with his waywardness; and even, if death seems likely to occur, to look at it from a child's point of view, not from that which our larger understanding of good and evil suggests to our own minds, are duties of the gravest kind, which weigh on the physician, on the parent, on the nurse; and which it behooves us to remember none

the less, because they are not dwelt on in the lecture-room, or in the medical treatise.

But not only does the child live in the present far more exclusively than is possible for the adult, but there are besides other important points of mental difference between the two which have a serious influence on the manifestations of disease, and also on our treatment of it. The mind of the child is not merely feebler in all respects than that of the adult, but in proportion to the feebleness of his reasoning powers, there is an exaggerated activity of his perceptive faculties, a vividness of his imagination. The child lives at first in the external world, as if it were but a part of himself, or he a part of it, and the glad-heartedness which it rejoices us to see is as much a consequence of the vividness with which he realizes the things around him, as of the absence of care to which it is often attributed. This peculiarity shows itself in the dreams of childhood, which exceed in the distinctness of their images those which come in later life, and shows itself too in the frequency with which, even when awake, the active organs perceive unreal sounds, or conjure up at night occular spectra; and these not merely colors, but distinct shapes, which pass in long procession before the eyes. This power fades away with advancing life, until, except under some condition of disease, the occasional appearance of luminous objects in the dark, remains the only relic of this gift of seeing visions with which, in some slight degree at least, most of us were endowed in our early years. The child who dreads to be alone, and asserts that he hears sounds or perceives objects, is not expressing merely a vague apprehension of some unknown danger, but often tells a literal truth. The sounds have been heard; in the stillness of its nursery, the little one has listened to what seemed a voice calling it; or, in the dark, phantazms have risen before its eyes, and the agony of terror with which it calls for a light, or begs for its mother's presence, betrays an impression far too real to be explained away, or to be suitably met by hard words or by unkind treatment.

Impressions such as these are common in childhood even during health. Disorder, direct or indirect, of the cerebral functions, more commonly the latter, greatly exaggerates them. The minor degrees of somnambulism, such as getting out of bed while asleep, are by no means uncommon in childhood, and even more frequent are those attacks of night-terrors, in which, after a short doze, the child awakes in a state of intense alarm, with the distinct vision before it of some frightful object, which does not disappear for some minutes, and which returns sometimes the same night, sometimes the succeeding one, with just the same appearance as before.

It follows, then, that the circumstances which surround a child, whether in sickness or in health, are of far more importance than are those about the adult; and that their influence for good or for harm, is far more powerful, and is never to be lost sight of in the treatment of the diseases of early life.

But while the child lives thus in the present, and while this

present is but the reflection of the world around, its impressions uncontrolled by experience, ungoverned by reason, the moral qualities are not in the same undeveloped state as the intellectual powers. The child loves intensely, or dislikes strongly; craves most earneslty for sympathy, clings most tenaciously to the stronger, better, higher, around it, or to what it fancies so; or shrinks in often causeless, but unconquerable dread, from things or persons that have made on it an unpleasant impression. Reason as yet does not govern its caprices, nor the more intelligent selfishness of later years hinder their manifestation. The waywardness of the most willful child is determined by some cause near at hand; and he who loves children and can read their thoughts, will not, in general, be long in discovering their motives and seeing through their conduct.

One word more I have to say with reference to that intense craving for sympathy so characteristic of the child. It is this which often underlies the disposition to exaggerate its ailments, or even to feign such as do not exist, and in which attempts at deception it often persists with almost incredible resolution. Over and over again I have met with instances, both in private and hospital practice, where the motives to such deception were neither the increase of comfort nor the gratification of mere indolence, but the monopolizing the love and sympathy which, during some bygone illness, had been extended to it, and which it could not bear to share again with its brothers and sisters. This feeling, too, sometimes becomes quite uncontrollable, and the child then needs as much care and as judicious management, both bodily and mental, to bring it back to health, as would be called for in the case of some adult hypochondriac or monomaniac.

These mental peculiarities of early life may seem at first to have little to do with the cure of disease; but in reality you will find that this is not so; but that in proportion as you make them your study, and as you become able in consequence to sympathize more completely with your patient, will your diagnosis in many instances be more accurate, and your treatment more successful.

This brief sketch must suffice for the first part of my subject, and will, I trust, have prepared you for the better examination of the second, namely, the influence of disease upon the mind in early life. This shows itself either in weakening of the perceptive powers, or in altering and perverting the moral faculties. Of these, sometimes the one, and sometimes the other, is the more obvious, though it is very rarely that either exists absolutely alone.

As in diseases of the body, so in the affections of the mind in early life, the power of repair furnishes us with a constant ground for hopefulness, which we should be less warranted in indulging in the case of the adult. The dullness, the apathy, the cerebral disturbance, which accompany many of the diseases of early childhood, have therfore by no means so grave an import as we should be compelled to attach to them, if present to the same extent at a more advanced age. The whole of the child's intellectual energy is

expended on his commerce with the world around him; his relations to it are disturbed; night terrors bad dreams, distressful phantasms, betoken this; or the ear is pained by sounds, and the eye by light—not because the organs of sight or of hearing are specially disordered, or the brain is specially affected; but because, with the limited mental endowments of the child, such are the only ways in which their sympathetic disorder can manifest itself. Or the disease has passed away; the active, intelligent, observant child is left dull, takes no interest in what goes on around him, forgets his prattle, seems scarcely to know the simplest word, though before he spoke fluently. This, again, need not cause too much apprehension. The child's memory is feeble; during the protracted illness, the customary impressions were no longer made upon his senses in the sick-room, or they passed unnoticed in the unconsciousness of fever; so that, when recovery takes place, the lesson has to be learnt again, and learnt with faculties weakened by the bygone ailment. For this you must be prepared, and prepared also for the very gradual process, extending sometimes over months or years, by which the ground lost is made good again: the time occupied by it being in general all the longer, in proportion as the child was younger when the original attack of illness came on. The infant of eight months old will show for months no ray of dawning intelligence; the little one just beginning to speak, will remain silent for months; while the child of four or five years will generally in a few weeks regain his forgotten lore. Simple as all this seems to be, and really is, it yet is not always borne sufficiently in mind; and these hints may enable you to save your patient's friends from much needless anxiety.

There is a caution, however, not to be lost sight of in these cases; namely, that protracted illness, even when unaccompanied by evidence of serious disorder of the brain, is sometimes succeeded by permanent impairment of the sense of hearing, and that the child's dullness may be the result of the loss of the power of receiving impressions, through one most important medium, from the external world.

A little girl, two years and nine months old, was attacked at the age of one year and nine months by what was said to have been inflammation of the lungs, though it is uncertain whether or no a convulsion occurred at the outset. She got well without any other sign of cerebral disturbance having manifested itself. Before the illness, she was beginning to talk, used to call her father, and to say many little words, but since then she had not spoken at all. The question raised was, whether the silence and some strange ways, different from the child's previous manner, were indicative of disease of the brain and of incipient idiocy, or were merely the results of her loss of hearing. I took the child into the hospital for a time to watch her; her intelligent countenance and strangely earnest manner showed almost at once that her intellect was acute enough. A very few days' observation confirmed this impression;

the child was dumb because she had become deaf, and her speech had ceased so soon, because the progress she had made at the time when illness first overtook her was so small.

If the same accident occurs somewhat later in life, when the child has learnt to speak pretty well, its nature is more likely to be misunderstood; for the child does not all at once forget to talk, but speaks imperfectly with gradually lessening distinctness; and forgetting first some words, then others, her condition more nearly resembles one of imbecility; and unless special care be taken to test the powers of hearing, error is very likely to be committed. I confess I made this mistake myself in the case of a little girl four years and seven months old, whom I first saw a year after an attack of a somewhat ill-defined febrile character, accompanied by a comatose condition, which lasted for several days, and left her in a state of great weakness. Though she regained strength, it yet was a long time before she tried to speak again; and, when she did, her articulation was very indistinct. In the course of time, she seemed as strong as ever, and her intelligence appeared not deficient, but her utterance grew more and more indistinct; she became flushed, angry and excited, and made inarticulate noises when she could not obtain what she wished, and when I first saw her she had for some time ceased to talk. Her altered temper, her fits of passion, the inarticulate sounds which had taken the place of speech, suggested the idea that idiocy was supervening on the disorder of the brain, which had formed so marked a feature of her illness. In a short time, however, careful observation ascertained that speech had ceased, because the sense of hearing first had failed, that the case was one for the deaf and dumb school, not for an idiot asylum.

The arrest of development, or the positive retrocession of the mental faculties in childhood may be regarded almost invariably as of far less serious import than any manifest perversion of the moral powers. The child who, in spite of intellectual dullness, attaches itself to those about it, and manifests the ordinary childish feelings, is not one concerning whom there is any occasion to despair, or whom judicious training will not do very much to improve. Several circumstances influence the degree of dulling of the mental powers, and are to be taken into consideration in forming an estimate of the child's condition, and his capabilities of improvement. In proportion as the original illness was accompanied with convulsions or serious cerebral disturbance, will the subsequent impairment of the intellectual powers be profound, and their recovery slow in taking place. In proportion, too, to the early age at which such illness occurred will its results be serious; and this not necessarily owing to the gravity of the mischief, but owing to the low state of attainment to which the child had reached when its further advance was interrupted. Thus, for instance, the apparent obscuration of intellect will be greater if it had overtaken the child before it had learnt to speak, than if it had come on later; and though not the less teachable, yet more will remain to be taught in the for-

mer case than in the latter; and a child, perfectly capable of improvement, may be passed over as utterly destitute of all capability of intellectual progress, owing to the age at which disease overtook it not being borne in mind. Lastly, it must be remembered that a very large number of children, whose intellectual progress has been arrested at an early age, are allowed to grow up for years without any culture whatever, and that as much of their apparent dullness may be due to unintentional neglect as to actual disability.

Thus it happened to me, not very long since, to see a little boy, aged six years, the eldest of three children of parents in whose family no other instance of intellectual deficiency had appeared. This little boy had been attacked by convulsions when eight months old, at which time teething was just commencing. These convulsions were not violent; they recurred at intervals for two months, when they ceased; and neither fits nor any other form of cerebral disorder had susequently appeared. He was left, however, by these attacks unusually dull; and though his bodily development had been uninterrupted, he had never made any attempt to speak. He was attached to those about him, was cleanly in his habits, decided in his likes and dislikes, was almost always happy; amused and pleased with trifles, but in a state of constant unrest, scarcely quiet for a minute at a time; not to be persuaded to sit down except when thoroughly worn out, and unable to fix his attention on any object whatever. His parents called him a dumb boy, and as such he had been passed over almost without a thought by those who had seen him. I found that his hearing was perfect; I noticed, too, that the sounds he uttered, though inarticulate, were modulated, according to the feelings of which he intended them to be the expression. I said that he was not dumb, that speech would be acquired under judicious teaching; that to fix his attention to simple objects was the first step towards his improvement; that this step gained, ideas would not be long in being followed by words.

He was sent by my advice, in the absence of other means of teaching, for a few hours daily to one of those institutions in which, under the name of the Kinder-Garten system, a modification of the Pestalozzian and infant-school system of education is carried out; and here, for the first time in his life, an attempt, and necessarily a very imperfect one, was made at training and teaching. At the end of six weeks he was already much improved. He uttered a few words, and these were associated with ideas, not parrot-like, acquired by mere imitation. That, however, which to my mind was the most satisfactory index of improvement was, that he who before could not be induced to remain quiet for a minute, now sat by his teacher's side for five or ten minutes attending to his instructress. He distinguished colors, selected them according to their names; he plaited sticks, and built with bricks in imitation of patterns; he saw when he had failed, and himself endeavored to rectify his mistake—achievements very humble indeed in comparison with most children of his age; but yet to my thinking a great

triumph as the results of the first six weeks of teaching, which (from no want of love or care, but from mere want of knowledge) had ever been expended on the child.

Apart from those instances, almost exclusively congenital, in which arrested development of mind is associated with arrested development of body; where the feeble and misshapen frame forms a fit tenement for the feeble and unformed spirit; where the body seems almost as little alive to physical impressions as the mind is to intellectual perceptions, where the feet refuse to walk, the hands to grasp, and almost the jaws to masticate, where in fact the lowest degree of idiocy is present; I think the state of the moral powers more important as a guide to our prognosis than the condition of the intellectual. Want of affection, mischief, spite, causeless rage, indicate a state from which recovery is far more hopeless than from mere intellectual dullness; and more than this, the cases in which such perversion of the moral powers begins to manifest itself, assume at once a far graver aspect than they had before presented; and in such cases the establishment of moral control is the first step towards mental progress.

This brings me now, in the next place, to remark on some of the mental perversions of children, which come on independently of mere intellectual feebleness; or, if associated with it, the latter is frequently the consequence of the other, or at any rate succeeds it in point of time. Such phenomena we occasionally observe accompanying the development of epilepsy in childhood; attacks of fury coming on without obvious cause, neither preceding a fit nor following one.

A boy, aged nine years, was admitted into this hospital in June, 1852, suffering from epilepsy, which had come on causelessly during the preceding year. These fits were sometimes violent, and succeeded by much dullness, at other times they were of short duration, and followed only by slight head-ache. The boy remained in the hospital for about two months, and was then discharged unrelieved. The reason for his dismissal was that he had become liable to occasional seizures of maniacal excitement, in which he attacked the other patients; besides which if any circumstance displeased him, he not unfrequently stripped himself and walked about the ward naked, and this although usually a perfectly well-conducted child.

A little boy came under my observation at the age of eight years, of whom I learnt the following history. His health was perfectly good until, at the age of three years, he had a fall, which was followed by a violent convulsion, that lasted for sixteen hours; and a second fall, a year afterwards, was succeeded by another fit; and ten or twelve more occurred, though with diminishing intensity, during the ensuing twelve months. Afterwards fits took place only about once in six months, and they continued only for two or three minutes, and though accompanied were not followed by unconsciousness. He passed through the diseases of childhood with no impairment of his general health, and went to school, where though backward, he learned to read, and was not remarkably duller than

other children. At the age of six years, while still weak after a fit, he was taken into the park, and came back in a state of great excitement, running about, throwing things down, though not falling nor having a fit; and during the continuance of this condition he still went to school, and though regarded as very naughty and troublesome, his mind was as active as before. His ungovernable disposition, however, led to so many quarrels with his schoolmaster, that at seven years of age he was removed from school; but it was not till more than seven and a-half years old that any marked dulling of his intellect became apparent. He then began to leave off speaking; not articulating indistinctly, and losing by degrees the power of utterance, but apparently intentionally abstaining from speaking, and for two months before I saw him he had not uttered a word, but made signs for whatever he wanted, and became violently excited if these signs were not comprehended. When I saw him he was in a state of restless excitement, moving incessantly, and if left unwatched, either attempting to destroy any object that was within reach, or trying to gratify a propensity to masturbation, to which he had recently become much addicted.

I need not give more details of this case. I referred to it only as exemplifying the way in which perversion of the faculties sometimes precedes their dullness—sometimes exists altogether without it. Between such cases and cases of real idiocy the difference is very wide indeed; though, for obvious reasons, not at first so striking as between the insanity and imbecility of the adult. The child whose mind becomes disturbed at a time when his education is still imperfect, his stock of ideas very limited, his experience very small, rapidly retrogrades, forgets his recently-acquired attainments, and, at the age of nine or ten, will be found—if his mental disorder has lasted for a year or two—as destitute of intelligence as the child who from birth had been incapable of education.

These attacks of maniacal excitement and the more acute forms of insanity usually, though not invariably, follow or accompany epileptic attacks; but slight degrees of mental perversion sometimes manifest themselves in early life, which, for want of being understood and properly dealt with, assume with advancing years the character of insanity, and of insanity in its least hopeful forms.

As I have already mentioned, almost all of the mental disorders of early life take the form rather of moral than of intellectual disturbance. Distinct hallucinations, fixed ideas, the various forms of insanity or of monomania, such as appear in the grown person, can hardly occur in the child; but the whole moral equilibrium is sometimes suddenly shaken, by a cause which may perhaps hardly seem equal to the production of so grave a result; or more slowly the temper may alter, the passions grow ungovernable, or the child sink by degrees into the condition of the morbid hypochondriac.

How grave an effect a sudden shock may produce on the nervous system of a young child, was shown in the case of a little boy, five years old, who, when in not very good health, was taken, on October

23, to his father's funeral. The strange, sad scene overcame him, he shivered violently, became very sick, complained by signs of pain in the head, but had lost the power of speech, and was unable to protrude his tongue. He was able to swallow, but refused food; he lay listless and indifferent to all surrounding objects, but rested ill at night. On October 26, he was admitted into the hospital, when his expression was dull, his pupils were unnaturally dilated, he could not close his right eye, his mouth was drawn to the left side, and the saliva dribbled from the right corner of his mouth, power over the right arm was impaired, and the head was drawn to the left side. These symptoms did not persist; power over the right side returned by degrees, as did the power of speech, and that of protruding the tongue; but no corresponding improvement took place in his general condition. On October 28, he had for a few hours a gleam of cheerfulness—sat up, and played with toys—but this soon passed away. His days were spent in a drowsy, apathetic condition, varied only by calls for his mother, which did not always cease even when she was by his side; and the nights were, without exception, restless and excited. On November 3, convulsions occurred, and they were followed by deep drowsiness. The drowsiness deepened, the convulsions from time to time returned, and, early on November 7, he died—just sixteen days after his father's funeral. A little fluid in the ventricles of the brain, a little congestion of its vessels, was all that the anatomist could find. I supppose his mother was right. She said he died of a broken heart.

It behooves us to bear in mind that the heart may break or the reason fail under causes which seem to us quite insufficient; that the griefs of childhood may be, in comparison to the child's power of bearing them, as overwhelming as those which break the strong man down. In France during the ten years from 1835 to 1844, 134 children, between the ages of 5 and 15, committed suicide, or on the average 19 every year.

"In the greater number of the instances," says M. Durand-Fardel,—to whose researches I am indebted for the figures I have just quoted,—"in which the cause of the suicide of children is mentioned, one sees that they have killed themselves in consequence of punishment, or of reproofs, or of ill usage. These facts deserve special attention; they prove how much more the susceptibility and sensitiveness of children need to be taken into consideration than is commonly done."

The lesson which such cases teach is as important for the doctor who tends the child in sickness, as for the teacher who trains him when in health.

But, besides cases in which some comparatively sudden impression produces a sudden disturbance of the intellect, there are others in which the process is far slower, though the results are little less serious. Such are the cases in which mental disorder occurs as the result of over-tasking the intellectual powers. This over-work, too, is by no means in all cases due to the parents unwisely urging the

child forward, but is often quite voluntary on its part. Sometimes, too, the friends of the child are so alive to this risk, that they limit the hours of work, a precaution which nevertheless often proves inadequate from the want of some due provision for turning the thoughts and energies during play hours into a perfectly different channel.

In many instances, the neglect of physical health for the sake of mental culture, lays the foundation of grave constitutional disease, and the child dies at a comparatively early age from the supervention of acute hydrocephalus, or sinks under some form or other of the tubercular cachexia. In other cases, however, the body suffers less exclusively, but the whole nervous system seems profoundly shaken, and the moral character of the child is seriously and even permanently injured.

It is well for the child when the over-work produces for a season dullness and inability for further intellectual labor, for then comes, as a matter of necessity, the much-needed repose. In many instances, unfortunately, the power of application continues, and an almost morbid desire of learning takes the place of other feelings; but the temper becomes irritable, the waywardness extreme, self-control so lessened as to be almost lost, and, though affection is felt to its relatives and is often expressed by the child in exaggerated language, yet that affection by no means suffices to restrain the fits of obstinate ill temper, or of ungovernable passion. Headache is frequently complained of, and an alleged headache is often made the excuse, almost the justification of an outburst of bad humor. Sometimes, too, slight threatenings of epilepsy come on:—a momentary unconsciousness, an unsteady step, a trip of the foot in walking, but even these are often so slight as scarcely to attract the attention of those who deplore the child's altered character. With these changes in its disposition, too, there is often a morbid anxiety with reference to its own health, and the child, exaggerating its ailments, alienates the love of those to whom it has become a daily source of anxiety and torment, and thus grows more and more self-involved and less accessible to the kindly influence of others. It is, too, in this morbid condition of body and mind that the habit of masturbation is not unfrequently contracted, and weakens alike the physical powers, the intellectual capacity, and the moral sense. The gradations are almost imperceptible, by which the slighter degrees of mental disorder—arising in these circumstances—pass into a state of confirmed insanity in youth or in adult age. In the boy, fortunately, the changes in external circumstances, as he grows older, often save him from progessive deterioration, and restore him at length to usefulness, though often with diminished powers, a feeble body, and a stunted mind. The girl does not enjoy the benefit of any similar changes as she emerges from childhood, and hence, though in her case also the worst issue is not the most common, she yet often remains a nervous and hysterical invalid, unfit to manage a household, unfit to bear children, or to rear them—a

creature of whims and fancies, a burden to herself, a trouble to her friends.

Reference has already been made to the disposition, amounting almost to a monomania in some children, to exaggerate the ailments from which they are suffering, or to feign such as have no existence. A morbid craving for sympathy seems to be the main-spring of their complaints, and children will put up with scanty fare and painful treatment as long as they can engross attention, and be the centre around which everything in the household turns.

A few months since a little girl was admitted into the hospital in a state of extreme emaciation, who had been ill for nearly twelve months; various hysterical symptoms, the nature of which had been recognized by the medical man under whose care she had been, having marked the commencement of her ailments. On their subsiding, the child had pronounced herself unable to walk, and for seven months had obstinately remained in bed, had eaten little, and had lost flesh and strength together, till she was brought here as a case of almost hopeless paralysis by her mother. "Put her down," I said to her mother, "and let me see her stand." "Oh, sir! she has not put a foot to the ground for seven months." The order was repeated, the child obeyed the unwonted tone of command, and stood. "Now, walk!"—again a remonstrance, but she walked. She was admitted into the hospital, and the first surprise over, she reiterated her statement of inability to walk. She could not take food, she said, and for some time had to be watched at every meal, and fed almost like an infant. Self had occupied all her thoughts; to call her out of herself, to induce her to occupy herself, bribes and promises and threats were tried by turns. By degrees she was got to stand, and no support being left within reach she kept standing rather than fall upon the floor, and then she walked to the nearest object against which to rest herself. She gained flesh and strength when proper nourishment was not only supplied, but when she was compelled to partake of it. Her mother's visits, by my desire, became few and brief; good-humored raillery and the occasional jokes of her fellow-patients took the place of the too ready sympathy which she had received at home, while praise and rewards followed every attempt to do as she was desired. At last, in the course of some two months, she ate and drank, she walked, and employed herself much like other children, except that she still persisted in bending her back almost double, save when under apprehension of galvanism to the spine which she greatly dreaded, and to avoid which she would sometimes walk about almost as upright as another child. She was sent into the country about a month ago, and having vainly attempted to deceive the intelligent person who has charge of her, holds herself upright, and seems to have given up all pretence of illness.

It would be easy to multiply instances of these feigned diseases in children. I have referred to them not merely because it is of importance to avoid being misled by them, but rather because they

illustrate one phase of mental disorder which is not very rare, and which can be corrected only by much care, much gentleness and patience.

Lectures on Experimental Pathology and Operative Physiology, delivered at the College of France, during the Winter Session 1859–60, by M. CLAUDE BERNARD, Member of the French Institute; Professor of General Physiology at the Faculty of Science.

GENTLEMEN—Our constant purpose in the preceding lectures has been to exhibit, in the strongest light, the intimate connexions which subsist between Physiology and Pathology, and to establish, as far as it lay in our power, that all the phenomena which take place in the living body, whether in health or in disease, are, in almost every case, capable of being rationally interpreted, and distinctly traced back to the action of those laws which regulate the vital functions, both in the normal state, and in its various deviations.

We learn, however, from daily experience, that whatever their general effects may be, the causes of disease are far from acting with equal intensity upon the various individuals who are exposed to their influence. Cold, hunger, thirst, fatigue and moral suffering;—are not these the constantly recurring causes of sickness? and are they not, in some measure, the lot of the whole species? How, then, does it occur, that among those who daily undergo their action, certain individuals are found to give way, while others resist? and, when epidemics are raging in given localities, how does it occur that some persons only are effected with the prevailing distemper, while others, who live in constant communication with the victims, escape unharmed? To the mysterious power which thus modifies, in each particular case, the influence of external agents, we give the name of Idiosyncrasy.

We may, I believe, take it for granted, that not only morbid, but also physiological predispositions exist in man as well as in the lower animals: even in a perfect state of health each individual retains his own peculiar habit of body, and is, in consequence, more liable to certain accidents than his neighbor. The various animals which serve for our experiments are far from exhibiting the same phenomena, under the influence of agents entirely similar in their nature. You are already aware that as we rise or descend in the scale of being, we find animals endowed with different degrees of sensibility to the action of certain poisons—those, for instance, which operate more especially on the nervous system. There exist, therefore, within the limits of health considerable differences between living beings; and, as we have previously established, these various properties are not merely the result of organi-

zation, but frequently depend on the condition in which the animal has been placed. In this manner, as we have already seen, a rabbit may be brought down to the level of a bactrachian; and, by reversing the experiment, the inverse result may be obtained. Now, these important modifications are almost invariably produced through the agency of the nervous system.

Not only do the various species of animals differ in this respect; but even individuals belonging to the *same* species are so far from resembling each other, that they cannot be submitted to the same experiments. So exquisite is the nervous sensibility of dogs of the higher breed, that the slightest operations bring on fever, and are attended with alarming symptoms; they cannot, therefore, be employed in researches connected with the gastric juice, the pancreatic secretion, etc.; in fact, all operations performed within the abdominal cavity are liable to superinduce peritonitis in these highly sensitive animals, and generally prove fatal. In dogs of a more vulgar class, how different are the results of similar experiments! During the operation, the animal hardly attempts to move, and scarcely seems to suffer; the appetite remains unimpaired, and the secretions normal; in short, the various functions of the economy pursue their natural course.

In the horse these differences are, if possible, still more strongly marked. The characteristics of certain breeds are, in colloquial language, attributed to blood; it would be more correct to attribute them to nerves; an irritable, sensitive, and highly organized nervous system is, in fact, the essential difference which separates a race-horse from one of those diminutive half-wild ponies which hilly countries so abundantly produce. Would not the results of the same experiment be entirely at variance in these different animals? and what comparison could we possibly establish between them? It is, therefore, indispensable whenever great powers of endurance are required for the purposes of scientific research, to select an animal of the lower breed; if, on the contrary, sensitiveness and nervous irritability appear desirable, none but the nobler kinds will afford the requisite qualities. Experiments on recurrent sensibility, for instance, which, in the greyhound and pointer, are generally successful, if tried on a shepherd's dog would fail in almost every case. Cold-blooded animals stand, of course, in this respect, at the very bottom of the scale. It will, therefore, easily be conceived, that a state which in certain animals would constitute actual disease, may be perfectly natural in others.

The difference between individuals may be naturally expected to be far more extensive in man, than in all other living beings; and, if we might venture to allude to a subject which actually occupies the public attention, is not hypnotism a peculiar state, which can only be superinduced in a small number of highly sensitive and nervous patients? and do not all the phenomena of mesmerism, somnambulism, and similar nervous symptoms, fall under the same general rule? It is, therefore, evident that idiosyncrasies

are only peculiar susceptibilities which exist, in the normal state, in various individuals.

Up to this moment, however, we have only examined physiological and innate predispositions, so to speak; but, as medical men, we are far more deeply interested in the investigation of accidental, transitory, and morbid idiosyncrasies. To ascertain the circumstances which may be supposed to give them birth, is, to the physiologist, a most important object of research.

If we compare an animal in a state of abstinence to one in full digestion, the most evident discrepancies will be noticed in the results of experiments simultaneously performed upon them. A dose of strychnia which almost immediately kills the second, will not act before a certain lapse of time upon the first. The powers of absorption have, of course, been called into account for so remarkable a fact, but we are aware that absorption, in a state of abstinence, is more active by far than during the process of digestion; the explanation is therefore unsatisfactory. The lowering of the physiological activity of the nervous system is, in reality, the only cause to which the difference can possibly be referred. When deprived of food, the animal gradually sinks in the scale, and acquires properties altogether foreign to its previous state. Is this a morbid condition? No; but the natural result of a well-known physiological process.

We, therefore, entirely deny the existence of a so-called Morbid Physiology, if by this expression a state of things entirely independent of the ordinary laws of life, is to be understood. Such expressions ought to be expunged from the book of science; they only serve to render our notions confused, and lead the student astray. When speaking of Medical Chemistry, for instance, we do not pretend to say that the chemical actions which take place within the living body are totally distinct from those observed without. Morbid physiology has, no doubt, its laws; but they are precisely the same as those which regulate, in the healthy state, the vital functions.

Not only abstinence, but cold and various other causes, modify the conditions of life, and alter the results of our vivisections; under a low temperature, cold-blooded animals grow less sensible to the action of certain poisons; a larger dose of strychnia is required to kill a frog in winter than in summer. But chloroform, ether, and even more ordinary inebriation produce similar results; and, in America, it appears to be generally understood that intoxication is a preservative against the bite of the rattlesnake.

These, however, are the physiological modifications of the system. Our purpose is to investigate those which pertain to the morbid state. It is a well-ascertained fact that medicines do not act on sick people in the same manner as on persons in the full enjoyment of health. Now, the biological conditions superinduced by disease evidently lie at the root of these irregularities. To adduce a well-known instance of this, wine, brandy and ardent spirits—so freely used by certain American physicians in the

treatment of low fevers, remain apparently without effect on the patient, even when administered in quantities which, in a state of health, would inevitably produce intoxication. A two-fold explanation of the fact presents itself—firstly, the process of absorption is almost entirely suspended; secondly, the nervous system is strongly depressed. You are, of course, aware that, in cases of typhoid fever, the absorbent powers lie dormant for a long space of time; a fact established by the following experiment: If small quantities of prussiate of potash are dissolved in the patient's drinks, no vestige of this substance is discovered in the urine, or in any other secretion. A similar state of things may be physiologically superinduced; for where secretion is over-excited, absorbent surfaces lose their properties. The inner surface of the salivary gland, which, in a state of rest, rapidly absorbs strychnia or woorara, ceases in some measure to do so when secretion is going on. Five cubic centimetres (one-third of a cubic inch) of an aqueous solution, containing one-hundredth part of strychnia, being injected into the parotid duct in a dog, the animal was almost instantaneously killed. The same experiment being tried on another, in which secretion was kept up by means of galvanism, life was protracted for the space of twelve minutes. Cholera is evidently another instance of the same fact. No substance whatever is absorbed by the intestinal walls, as long as this abundant and characteristic serous discharge continues. But disease, it will be said, is the origin of all these modifications. True; but a physiological process takes place under its influence, and the facts observed are its natural results.

The deficiency of the absorbent power has equally been found to exist under circumstances entirely different from those we have just examined. It occurs, for instance, in mania. Nervous influence here appears to be the sole agent; for, as soon as the acute crisis is past, the process of absorption recommences, as in the healthy state.

Woorara has been used of late in the treatment of tetanus. Out of four cases two have recovered—the other two died; but, in both the successful cases, the ordinary—or, so to speak, the physiological—effects of the poison had been produced; while, in the other two patients, no such result was obtained. Doubtless some peculiar conditions of the nervous system, rendering all impregnation impossible, existed in these two latter cases; perhaps, if treated at an earlier period of the disease, the patient might have recovered. In this respect the well-known effects of sulphate of quinine may be adduced. When administered in large doses (*e. g.* in cases of acute rheumatism), it never abates the pulse nor relieves the other symptoms without previously occasioning deafness—a physiological effect intimately connected with its therapeutical agency, for when, after improving the patient's condition, the dose is too abruptly diminished, the deafness disappears, and all the symptoms previously kept down break out again in full force.

But we also find in animals various predispositions, which not

only modify the action of medicines administered to them, but also render them liable to diseases entirely different, when suffering from causes entirely similar. Being about to perform certain experiments on animals kept fasting for a long space of time, I left some dogs without food for several days; but during the late severe frosts, these animals died unexpectedly. In making the autopsy, we discovered pneumonia in one case, pleuritis in another, and inflammation of the bowels in the two last. Thus, under conditions perfectly identical, these animals were affected with totally different diseases. But similar results may be obtained at will by the physiologist. When rabbits are placed under total abstinence they generally live a fortnight or three weeks; but when certain branches of the sympathetic nerve have been previously divided, the animals die within a few days when deprived of food, through acute inflammation of the viscera connected with the nervous twigs that have been divided. When, some time ago, I commenced this series of experiments, I discovered that the section of large divisions of the sympathetic nerve was apparently unattended with the slightest inconvenience as long as the health of these animals remained perfect. Some of them even became pregnant and brought forth their young; but as soon as a general debilitation of the system arose from want of proper nourishment, acute inflammation was produced in the organs deprived of nervous influence.* We had, thorefore, succeeded in artificially creating particular idiosyncrasies in these animals, and could predict with perfect certainty that as soon as health failed disease would arise on a given point.

Morbid predispositions must, therefore, be viewed in the light of peculiar physiological conditions, which, in most cases, depend upon the nervous system; and an immense progress would be realized in medicine, if it were possible to diagnosticate in a state of health the predisposition to disease, and foretell the coming danger. A Russian army physician, who had invented a new spygmometer, and had applied it to the study of various diseases, stated some years ago, that during a severe epidemic of cholera a peculiar slowness of the pulse existed, several days before the explosion of the disease, in those who were marked out to be its victims. I am not aware whether the reality of the fact has been ascertained by other observers; but it would be, at all events, a most precious boon to know beforehand, when epidemics prevail, what persons are more particularly liable to be affected with the reigning distemper; we should thus be far better able to adopt preventive measures, and prescribe hygienic regulations.

In concluding this lecture, gentlemen, let me advise you not to consider idiosyncrasies in the light of mysterious powers residing within the depths of our organs, nor as entirely novel functions superadded as it were to those which already exist; they must be viewed as mere natural manifestations of the ordinary laws of Physiology.

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* The relation which these experiments bear to the *vexata quæstio* of bleeding in inflammation, will, no doubt, strike the reader.—Translator.

Biography of Claude Bernard.

The intensely interesting and highly instructive Lectures on Experimental Pathology and Operative Physiology, which have been recently commenced at the College of France, by M. Claude Bernard, being about to appear in the columns of the *Medical Times and Gazette,* a brief notice of the labors and scientific career of their distinguished author may not be without interest for the reader.

M. Claude Bernard was born in 1813, at St. Julien, near Villefranche, in the department of the Rhone. I am unable to state exactly in what year he commenced his medical studies, but it must have been about '34 or '35, for, in 1839, he, after undergoing the customary ordeal, entered one of the Paris hospitals as "*interne.*"

Two years later he became attached to the lecture-room of the celebrated Magendie, at the College of France, his position being that of "*Preparateur.*" In other words, the duty devolved on him of making all the preliminary arrangements which the proposed experiments of that distinguished Professor might require.

In 1843, the youthful Bernard, after a brilliant examination, and the usual defence of a thesis, was received as M. D.; and, in 1853, he obtained the degree of "*Docteur en Sciences*"—no mean honor, as all those who know the severity of the test must admit.

In 1847, we find him occupying the honorable and important office of "*Suppleant,*" or substitute to Magendie, and even at times lecturing with very considerable ability to the crowds of scientific men and students who were wont to repair to the lecture-room of that distinguished man. This office, of such high trust and responsibility, he worthily held for seven years.

The natural bias of his mind had, from the very commencement of his studies, inclined him towards physiological researches; but, alas! Bernard was not one of fortune's favorites, and his scanty means forced him to quit the field where he was destined, at a later period, to gain such glorious laurels, and to return to the domain of Surgery. He even went so far as to publish a "*Manuel de Médicine Opératoire,*" in collaboration with M. Huette. Circumstances, however, having brought him in contact with Magendie, the marked taste which he speedily evinced for physiology satisfied that great man he might one day be surpassed by the young aspirant. Fortunately for science, Magendie possessed great influence over him, and succeeded in calling him back to his less lucrative but more favorite studies of physiology.

Some short time after this backsliding—if I may be allowed to use the expression—he was called upon to occupy a position of higher importance still, and one more consonant with his independent and speculative nature than that of assistant to another could possibly be. I allude to the chair of Physiology, which had just been created, in connection with the Faculty of Sciences.

But higher honors were in store, and thick and fast did they de-

scend on him; for we find that, shortly after having attained to the Professorship, he was elected a Member of the Academy of Sciences, in lieu of M. Roux, the eminent surgeon, whose death has just created a vacancy in that learned body.

The following year was signalised by an event which profoundly moved the scientific world—namely, the death of Magendie, whose name had been for years identified with the progress of experimental physiology, and who had, by his extraordinary success, earned for himself the name of "Chief of the Experimental School of Physiology of France." It is well known that the end and object of Magendie in all his teaching and investigations was the subjugation of theory to practice; and in this respect he was a most valuable guide and director to those who were disposed to follow him in his experiments. Sceptical and inquisitive by nature, he mercilessly overthrew whatever would not stand the test of experiment. From such a master the inquiring mind of Bernard could not but take a favorable bias. From such a man he could not fail to draw healthy inspirations. Hence we find Bernard adopting the principles of his esteemed master, and steadily and perseveringly improving and enlarging the field of experimental science—philosophically considering and investigating the normal and morbid manifestations of the animal economy and the laws of life. It was but natural to suppose that the illustrious Magendie should be replaced by his talented pupil; and right worthily has he since filled up the blank which his master's death created, as the attentive and admiring crowds always to be seen in his class-room amply testify. It is not the orator they flock to hear, for, as a speaker, we daily hear better. So rapidly do his ideas seem to succeed each other that he is often at a loss to find words to clothe them. His voice, though not harmonious, is far from being unpleasant. In stature he is above the middle size, well knit, broad-chested, of a nervo-bilious temperament—the latter element predominating. A highly intellectual expression of countenance, with a large and powerful head, give unmistakable evidence of the energy and indomitable perseverance of the man. Though not a rhetorician, in the strict sense of the word, he possesses the rare and happly talent of captivating and enchaining his audience, and inspiring them with the conviction that he is fully and completely master of the subject which he expounds.

But to take a glance at his labors, and what he has already achieved in his particular department. Almost all of his discoveries are of a highly important and practical kind; and they have given, within the last few years, quite a new character to physiological investigation. He has not only struck out new paths, but he has roused the attention of the scientific and the learned to the reconsideration of many fundamental questions which were supposed to have been long settled, but which, in reality had been but imperfectly established; and he has thereby contributed much to a clearer, a more correct, and a more comprehensive appreciation of the essential functions of the animal economy. As far back as

1844, when he was comparatively a young man, and but newly entered on the field of physilogical investigation, he published an elaborate paper on the different secretions of the alimentary canal, and the parts which they respectively play in the digestive process. He had the merit of being the first to show the real mechanism of the secretion of the gastric juice, and the various changes and modifications produced by this liquid on the aliments taken into the stomach. Not less interesting and instructive are the results of his investigations into the saliva and the intestinal secretions generally, and his inquiries into the influence of the different pairs of nerves on the organs of digestion, circulation, and respiration.

But it was in the year 1849 that Bernard first laid the real foundation of his reputation as an experimental physiologist. Prior to this period the real function of the pancreas was involved in obscurity. It had been considered in the light of a salivary gland—a conclusion derived from the similarity of its structure to organs of this class. By a series of carefully-conducted experiments, Bernard showed most conclusively that the real function of the pancreas related to the formation of chyle and the digestion of fatty matter taken into the stomach. For this important discovery he was honored with the great Prize for Experimental Physiology, awarded by the Academy of Sciences in that year.

In 1850, he made known to the scientific world his first discoveries in connection with the liver; and he showed that this organ—the principal use of which in the animal economy was believed to be the secretion of bile—had, in reality, another important function, the existence of which had been, up to this time, completely ignored by physiologists. This discovery was no other than that the liver, in its normal condition, besides secreting bile, was constantly producing sugar. To this new function he gave the name of "*Fonction glycogénique du foie.*" By an immense number of experiments, conducted on species belonging to three of the principal branches of the animal kingdom, he proved to the entire satisfaction of the Academy of Sciences that the blood, before entering the liver by the venæ portæ, contains no sugar; while that which leaves the liver, to enter the heart by the hepatic veins, is abundantly charged with this element. He further proved that this new function was intimately connected with and influenced by the nervous system, and that, by operating on the latter at certain points, an artificial diabetes mellitus can be produced at will. This important discovery, which at first met with much opposition, is now, so far as I know, an acknowledged fact; and its importance, as regards the pathology and treatment of diabetes, is too evident to require remark. It follows from it, that this malady is nothing more nor less than the disturbance of a physiological function; and, that function residing in the liver, it is to this organ, and to those parts of the nervous system which influence it, that the medical man must direct his attention, with a view to its cure. For this most important and practically useful discovery, M. Bernard was again awarded the great prize for Experimental Physiology.

In 1851, his researches in connection with the great sympathetic were so highly approved by the Academy of Sciences, that, for the third time, he received the great prize in physiology. They have since been published, and are not the least interesting of his numerous productions. He shows, therein, that if a section be made of any of the branches of this nerve, the temperature of the parts which they supplied is instantly and permanently augmented, and that the inverse of this takes place when the nerves of the cerebro-spinal axis are divided—in other words, that, in this latter case, there is a manifest diminution of the temperature. Further, that the section of the branches of the great sympathetic, besides being followed by increased temperature, is also attended with great vascularity of the parts which these branches supply. It is easy to appreciate, in practical medicine, the great value of these discoveries, which, up to the present time, so far as I am aware, have not been controverted.

Other discoveries on the subject of animal heat, too numerous to be embraced in this notice, have also been made known by M. Bernard. His experiments, proving the elective elimination of certain substances by the secretions, and especially by those of the salivary glands, as well as his discoveries on the special functions of the spinal nerves, are fraught with intense interest and importance, as well to the physiologist as to the practical physician. Indeed, there is hardly a question in the wide domain of physiology and pathology which has escaped his attention.

Having thus touched on the leading points in M. Bernard's scientific life, we must not forget to add that he follows science for science' sake; patiently and perseveringly he toils for seven or eight hours every day in his laboratory. The world is deeply indebted to him; and, nevertheless, he is but poorly remunerated. His two professorships—the one at the Faculty of Sciences and the other at the College of France—together with the trifling sum derived from the Institute, of which he is a member, constitute in all but a modest income—not greater, perhaps, than that of a moderately busy country practitioner in England. Thus is science honored—thus are its disciples recompensed in military and imperial France!—*Medical Times and Gazette.*

Medicine, its Deriders and Sects.

The substance of the following interesting notice on the vicissitudes and progress of medicine is derived from the *Revue des Deux Mondes.*

Antiquity had its critics—either bitter and brutal, or satirical and polished. Heraclites hated physicians; he was wont to say that they would be the most silly of men if grammarians were not

there to dispute the position with them. But this morose philosopher had his own system of medicine, and a peculiar practice founded upon his theories of Nature. He made such good use of it, indeed, that he at last died through it. Empedocles—jealous of the physician Acron, illustrious by his writings and experience—gave himself out as a messenger from heaven, charged with the mission of exterminating diseases and other destructive scourges; he journeyed from town to town, carried in a splendid chariot, clothed in magnificent garments, and received adorations and sacrifices like a god. We know how he died, victim of his vanity, or scientific curiosity. Plato, again, did not spare the doctors; he mocked with pleasure at their incapacity; but he, nevertheless, had a system of his own, which he had picked up from every quarter, as was his habit. From this we may conclude, that from the earliest days there has been a rivalry between doctors and philosophers, and that the last were jealous of the first.

The Greeks confined themselves to epigrams; but it was otherwise with the Romans. Physicians came at a late date into Rome, and had a difficulty in keeping their ground there. The elder Cato hated them, and prevented his son consulting them. And yet the rude censor practised medicine in his own fashion; he possessed infallible secrets and efficacious panaceas. His method was simple enough, and, absolute master of his house, he treated man and beast alike. Pliny gives us these details, and Pliny, we know, was not favorable to doctors. In Martial's epigrams, to say nothing of other Latin poets, the doctors are ill-treated enough, and, we must admit, not without justice. The profession was in the hands of slaves, and degraded by venal souls, easy instruments and too often accomplices of corruption, debauchery, immorality and crime. Decay had then invaded everything.

Next came the barbarians and universal confusion, and we lose sight of medicine during the first centuries of the middle ages. To the Arabs we are indebted for a sort of *Renaissance;* but it was in the first universities that the practice of medicine took the direction and the proper character which it bears still to this day. Now appeared the true physician, and by his side an adversary far more formidable than his opponent of antiquity.

Before the middle age, the art of medicine was decaying fast; and as it passed through this long period it still continued in decay The traditions of the Greeks were gradually lost; the exercise of the art fell into the hands of monks and clergy, for the most part very ignorant, and hence, superstitious practices and absurd proceedings—the supernatural and marvellous being put in the place of experience and good sense. It was a time of miracles and prodigies—the sorcerers rivalling the saints; and while the plague and the lepra committed ravages among the people, the resources of medicine were useless to arrest the scourges. The Jews at this time were hated and persecuted, but yet they were run after for their medical knowledge, and for the drugs obtained by them from the east through traffic with the Arabs.

The *Renaissance* awakened a spirit of inquiry. The records of antiquity, once again opened, were discoveries as of a new world. And then began the general strife against orthodoxy. Heretics and Protestants were to be found elsewhere besides in the church. Aristotle and Galen were treated like the Pope, and so commenced the long quarrel between ancients and moderns.

This struggle, also, medicine has passed through; but it gained an infinite number of enemies, and chiefly the charlatans. At an early hour these industrious gentry seized upon medicine, which offered so vast a field for the exercise of their ingenuity. From Montaigne down to Rousseau—not to mount higher or go down later—we find a concert of invectives against medicine, the noise of them being still audible, though weak. Infinite variations were played continually on the same strain. It has taken three centuries to reduce the pretensions of physicians to their true proportions. Chemistry, which appeared at the first dawn of the *Renaissance*, explained all the phenomena of the animal economy by the principles of a gross chemistry—seeing there nothing but fermentation, distillation, and effervescence of humours at work in the living laboratory. Then, later, after the discoveries of Galileo and Newton, mechanics, with its levers and instruments, explained the forces; and, after Harvey, hydraulics. Thus arose the sub-sects—iatro-chemists, iatro-mechanicians, and iatro-mathematicians. These were materialists, and soon found their opponents, the spiritualists. Truth was with neither sect, but the spiritualists have rendered most service to medicine. Stahl produced Barthez and Bordeu, and Bordeu produced Bichat. Still, even at this present day—but how enfeebled!—the two parties are face to face. Gradually they are disappearing, leaving in history the remembrance of their long and ardent struggles, prolonged for three centuries and a half—from the end of the middle ages to the commencement of the French revolution.

Two sects, either through indifference or through calculation, kept clear of the struggle—the empirics and the sceptics. At the head of the empirics was Sydenham. Their business was to watch attentively the origin and progress of phenomena, noting with scrupulous care effects of remedies and the fruit of observation, leaving aside all useless speculation.

Scepticism glided into medicine, thanks to the demi-savans. The title of sceptic belongs to those narrowed and pretentious souls, who, contented with a superficial view, seize only the surface of things, losing sight of the links which unite them, and boldly denying the existence of whatever escapes them, affirming in this absolute negative their incapacity and deficiency. Lower still in the scale of systems we find the eclectics—physicians who, following certain metaphysicians, think to find a perfect system in taking what is good out of every system. Their appearance on the stage announces the end of systems. In the scientific as in the social order, end means transition, a new phasis, commencement of a new order. Medicine,

which has undergone so many vicissitudes, is thus at present traversing a period of transition; it is in the way of organization, in a provisionary state.—*Med. Times and Gaz.*, Feb. 18, 1860.

The Gold-headed Cane.

We shall not be accused of imputing to them a lack of biograpical lore, if we suppose that a majority of our readers have never heard of a small volume, entitled "The Gold-headed Cane," which professes to be the reminiscence of this at one time constant accessory and companion of every physician, when in full costume, and going his professional rounds.

> "Physic of old, her entry made
> Beneath the immense full bottom's shade,
> While the gilt cane with solemn pride,
> To each sagacious nose applied,
> Seemed but a necessary prop,
> To bear the weight of wig at top."

The quondam editor, in a most commendably short prefatory "Notice," gives a clue to the brief history, by telling us: "A short time before the opening of the New College of Physicians [London], Mrs. Baillie presented to the learned body a Gold-headed Cane, which had been successively carried by Drs. Radcliffe, Mead, Askew, Pitcairn, and her own lamented husband. The arms of these celebrated physicians are engraved on the head of the Cane, and they form the vignettes of the five chapters into which this volume is divided."

The Cane begins its autobiography by saying, that "It was deposited in a corner closet of the Library, on the 24th of June, 1825, the day before the opening of the New College of Physicians, with the observation that I was no longer to be carried about, but to be kept among the relics of that learned body." After having been closely connected with medicine for a century and a half, it was natural that the gold-headed cane, like other celebrities, should employ its leisure in recording the most striking scenes it had witnessed. "Of my early state and separate condition," says the narrator, "I have no recollection whatever; and it may reasonably enough be supposed, that it was not till after the acquisition of my head that I became conscious of existence and capable of observation." The first consultation at which the Cane was present, was when its master, Dr. Radcliffe, was sent for, in the autumn of 1689, by the king, William the Third, then living at Kensington House. "We were ushered in, through a suite of several rooms, plainly but handsomely furnished, by Simon de Brienne; and it seemed to me that the Doctor assumed a more lofty air, and walked with a firmer step, and I was conscious of a

gentle pressure of his hand as he stopped and gazed for a moment on the likeness of the founder of the College of Physicians, Dr. Linacre, painted by Holbein, which was hanging in one of the rooms, among royal portraits of the Henrys, and several other of the kings and queens of England and Scotland.

"On entering the sick chamber, which was a small cabinet in the south-east angle of the building, called the Writing Closet, a person of grave and solemn aspect, apparently of about forty years of age, of a thin and weak body, brown hair, and of middle stature, was seen sitting in an arm-chair, and breathing with great difficulty. The naturally serious character of the king (for it was his majesty, William the Third), was rendered more melancholy by the distressing symptoms of asthma, the consequence of the dregs of the small-pox, that had fallen on his lungs." Dr. Radcliffe was not inclined to play the courtier on the occasion, and he addressed his royal patient in the following terms: "May it please your majesty, I must be plain with you, sir; your case is one of danger, no doubt, but if you will adhere to my prescriptions, I will engage to do you good. The rheum is dripping on your lungs, and will be of fatal consequence to you, unless it be otherwise diverted." The insinuation in the last remark was not complimentary to the king's body physicians, Bidloo and Laurence, nor was it in good taste nor conformable with good ethics. The indication to be fulfilled was to procure a flow of saliva, but by what means we are not informed. This, however, having been obtained, the king was entirely relieved, and "a few months afterwards he fought the battle of the Boyne."

Before leaving the palace, Dr. Radcliffe waited upon her majesty the queen, whose affability and cultivated mind are deservedly praised on the occasion. This estimable lady died five years afterwards of the small-pox—an incident which, by reminding us of the protection from this fatal and loathsome disease, afforded by vaccination, to both king and peasant, ought to make us proud of a profession which numbers a Jenner in its ranks. The death of his wife was keenly felt by the generally impassive king. Radcliffe, in a subsequent year, 1697, after the treaty of Ryswick, on being summoned to the royal presence, expressed himself with startling bluntness, by telling his patient that he must not be buoyed up with hopes that his malady would soon be driven away. "Your juices are all vitiated, your whole mass of blood corrupted, and the nutriment for the most part turned to water; but," added the Doctor, "if your majesty will forbear making long visits to the Earl of Bradford (where, to tell the truth, the king was wont to drink very hard), I'll engage to make you live three or four years longer; but beyond that time no physic can protract your majesty's existence." After an interval of three years, the king, while hunting, fell from his horse and broke his right clavicle, near the acromion. "This occurred in the neighborhood of Hampton court; but the French surgeon Ronjat was at hand, and soon reduced the fracture. But when he wanted to bleed his majesty, a new obsta-

cle arose, for it was necessary not only to have the sanction of some one of the court physicians, but also the authority of the privy council for the performance of this operation." Disregarding the recommendation of his professional advisers, that he should keep perfectly quiet, the king insisted on returning to Kensington; but on arriving there a new difficulty occurred, showing that royalty enjoys no special privileges over the commonalty, in exemption from the annoyances growing out of differences between doctors, on the score of diagnosis and of medical etiquette. A discussion arose between Bidloo and the surgeon, as to whether there had really been any fracture or not. "Ronjat strongly maintained the affirmative, the Dutch doctor as stoutly denied it. The point was at length settled, when a new difference of opinion occurred as to the mode of applying the bandages. Bidloo wished himself to apply them, but the surgeon said no. 'You are here either in the character of a physician or in that of a surgeon; if the former, you have nothing to do with bandages; if the latter, *c'est moi qui suis le premier chirurgeon du Roi.*' After the death of the king, a paper war took place, and the various arguments and statements advanced by each party were frequently mentioned in societies where I was present, for luckily my master had no share in these disputes." We pass over the remains of this digression in which the character of King William is sketched, and an incident related of his eating up all the green peas "then newly come in, without even once offering this rarity to his royal consort, or guest," her sister, the Princess Anne, afterwards queen.

To return to the eminent bearer of the gold-headed cane, Dr. Radcliffe, who was sorely tried in his first courtship and betrothal. The lady was an only child, rich, "and with a tolerable share of personal charms." "Matters seemed to proceed prosperously, and everything promised a consummation of my master's happiness; when, one evening, he returned late to his home, obviously much discomposed." One may well imagine his mortification, when we learn its cause, which was no less than a discovery that his betrothed had given her affections and her person to another man, of which fact she began to show proof beyond dispute. Well might the Doctor exclaim to himself: "Mrs. Mary is a very deserving gentlewomen, no doubt; but her father must pardon me if I think her by no means fit to be my wife, since she is or ought to be another man's already!" An occurrence of this nature was not adapted to the removal of Radcliffe's aversion to matrimony, although, later in life, at the maturer age of sixty, he did a wooing go. He is described as having an elevated forehead, hazel eyes, cheeks telling of the good cheer of former days; if anything, a little too ruddy; a double chin, a well-formed nose, and a mouth round which generally played an agreeable smile. Fortunately for literature and science, toward the advancement of which he left such noble legacies, the lady did not smile on him. "Suffice it to say," says our gold-headed biographer, "he was lampooned, proved unfortunate in his suit, and was styled by the wicked wits of the

day, 'the mourning Esculapius,' 'the languishing, hopeless lover of the divine Hebe, the emblem of youth and beauty.'" Prince Eugene, the friend of Marlborough, when on a visit to London, dined with Radcliffe, who determined that there should be "no ragouts, no kickshaws of France," but treating his guest as a soldier, he had his "table covered with barons of beef, jiggets of mutton, and legs of pork." A portrait of the Prince is drawn on the occasion. Reference is made here, for the first time, to Dr. Mead, who is introduced in the following dialogue. "He lived then in Austin Friars, and we found him, one morning, in his library reading Hippocrates.

Radcliffe (taking up the volume of the venerable father of physic), 'What! my young friend, do you read Hippocrates in the original? Well, take my word for it, when I am dead you will occupy the throne of physic in this great town.'

"*Mead.* 'No, sir; when you are gone, your empire, like Alexander's, will be divided among many successors.'" Mead had already written his treatise on Poison. Many rooms of his small house were filled with books, and the two doctors indulged in a long chat. Mead was very lively and entertaining, related several anecdotes of things which he had seen abroad; and described with great animation his joy in finding the *Tabula Isiaca,* in a lumber-room in Florence. "Upon this subject, my master asked many questions, and appeared much struck with the advantage of foreign travel to a physician."

Radcliffe encountered much ill-deserved odium for not joining Mead and the household physicians in visiting Queen Anne, in the last days of her fatal illness; and the death of the sovereign was laid to him. He was, however, unable to attend, being himself confined to his country-house, at Cashalton, in Surrey, by the gout, which had seized on his head and stomach. Soon after this time, as we read in the reminiscences of the Gold-headed Cane, he invited Mead to dine with him, and, after declaring his intention to withdraw himself from practice, he handed over to the latter the mute but valued companion in his daily rounds, and in a measure the medical sceptre itself. He gave, at the same time, a short sketch of his professional life. "My books," he says, "have always been few, though well chosen. When I was at the University, a few vials, a skeleton, and an herbal, chiefly formed my library." "I have always endeavored to discountenance the attempts of quacks and intermeddlers in physic, and by the help of Providence I have succeeded most wonderfully." He refers to his services at court, and the requital by the King (William), who, on one occasion, ordered him five hundred guineas (upwards of $2,500) out of the privy purse, for the cures of Bentinck and Zulestein. By attendance on his majesty, Radcliffe "gained, one year with another, more than six hundred pounds ($3,000) per annum." Dr. Gibbons was a lucky man in being the neighbor of Dr. Radcliffe, whose overflow of business, to which he was unable to attend, brought the former a thousand pounds a year. Speaking of his

failing health, and the short time he has to live, the retiring chief says: "The time is, I am afraid, barely sufficient to repent me of the idle hours which I have spent in riotous living; for I now feel, in the pain which afflicts my nerves, that I am a martyr to excess, and am afraid that I have been an abettor and encourager of intemperance in others."

Dr. Radcliffe died November 1st, 1714. His eulogy may be written in a few lines. The figures in it are not those of rhetoric, nor of poetry; but they carry with them a fullness of thought, a farsightedness, a force, and an animation, more convincing and more enduring in their effects than the finest prize poem or oration. They have elevated science, expanded literature, imparted new hopes to the desponding, raised the sick and the infirm from the bed of suffering, and snatched many from the grasp of death itself. Radcliffe wrought all these wonders by his last will and testament. He left his Yorksire estate to the Master and Fellows of University College, Oxford, forever, in trust for the foundation of two traveling fellowships, the overplus to be paid to them for the purposes of advowsons for the members of said college.

Five thousand pounds for the enlargement of the building of University College, where he himself had been educated.

Forty thousand pounds ($200,000) for the building of a Library at Oxford.

Five hundred pounds yearly forever, toward mending the diet of St. Bartholomew's Hospital.

After the payment of these bequests, and some legacies to various individuals mentioned in the will, he gave to his executors in trust, all his estates, in four counties, to be applied to such charitable purposes as they in their discretion should think best; but no part thereof to their own use or benefit. The result of this last bequest is seen in the Observatory and Public Infirmary at Oxford, both of which were erected out of the funds of Dr. Radcliffe's estate by the trustees of his will. The Radcliffe Library, which is, perhaps, the most beautiful building in Oxford, was finished in 1749. It has been appropriated by a resolution of the trustees to the reception of books on medicine and natural history. The streams of benevolence still flow in other and smaller channels from the sources kept open by the faithful and enlightened guardians of the Radcliffe estate-funds, in the exercise of the discretionary power with which they are intrusted.

Unsuccessful attempts to produce Variola in the Cow, by Inoculating with the Virus of true Variola. Perfect success on using the ordinary Vaccine Virus. By EPHRAIM CUTTER, M. D., Woburn, Mass.

Acting upon the commonly received opinion both of the public and the profession—namely, that cow-pox is small-pox modified and mitigated by a transmission through the system of the cow—it would be natural for any physician to expect to procure pure primary vaccine virus by simply introducing into the system of the cow the virus of variola from the human subject.

It was under this conviction that a series of experiments were conducted upon about fifty kine. It is proposed to give an account of the same in the present paper.

Experiment 1.—Nov. 26th, 1859. Inoculated four young kine with variola-virus taken on November 19th, from one of my own patients, at about the eighth day of the eruption. Punctures were made with a lancet upon the hairless skin beneath the tail and near the vulva. The virus was introduced upon quills and covered with isinglass plaster, as in the ordinary mode of vaccinating the human subject. At the expiration of a week, no effect like vaccination was produced. In fact, there seemed to be nothing more than a moderate inflammation, just such as would result from a non-specific puncture.

Experiment 2.—Dec. 27th. With variolus virus taken on the eighth day (Dec. 22d) of the eruption, by Dr. Luther Parks, Jr., of Boston, Dr. Alonzo Chapin, of Winchester, at my request, inoculated five kine. The writer inoculated seven, including steers and heifers.

Punctures were made with a lancet, near the vulva or anus, and upon the teats. The quills, charged with the virus, were introduced, allowed to remain a few minutes, and then suffered to drop out. The operations were conducted with the greatest care, so that there should be no mistake. About five quills were used upon each animal in this as in all the other experiments. On the 31st of December a few of the spots presented to the feel a round and flat hardness, about helf an inch in diameter. One spot had a central depression. This promised so much that it was very confidently expected that vaccine virus would be obtained. But the hope was illusory, for the spot did not pass through the normal stages of a vaccine pustule. On the contrary, it remained the same for more than a week, and then faded away. It was suggested by Dr. Chapin that the virus might possibly have been taken from a varioloid patient, (it sometimes being very difficult to distinguish between them,) and that thus the experiments proved nugatory. Subsequent experience, however, has not borne out the supposition.

Experiment 3.—Jan. 6th, 1860. Visited a patient of Dr. Toothaker of Wilmington, sick with severe variola, and charged quills with matter. The eruption was at the seventh day. Inoculated

seven kine with this matter, January 6th, 1860. In these cases the cuticle was abraded by scratches, made with a lancet, at right angles to each other, until the serum of the blood began to escape. The charged quill points were then rubbed upon the abrasions for a moment or two. No satisfactory results. To be sure, pustules, or something that looked like pustules, were obtained. They were umbilicated, and some of them hard to the feel, but no lymph could be got.

Experiment 4.—Procured some quills charged with variolous virus, from Dr. R. L. Hodgdon, of West Cambridge, on January 6th, and on January 7th, inoculated three young kine with the same. The mode was the same as in experiment 3d. No satisfactory result.

Experiment 5.—Jan. 13th. Visited, with Dr. Drew, of Woburn, a small-pox patient under his care, and charged some quills in the usual way. Besides, I charged some cotton threads, by rupturing pustules and imbuing in the lymph the threads for the distance of half an inch or more at their middle part. Within an hour of the procuring of this virus, the quills were inserted into several cattle by the usual punctures with the lancet. The threads were introduced beneath the skin by means of a needle. They were then drawn through to the point charged with the virus, and with this engaged under the cutis, the ends were tied, and the seton thus formed left in. The threads remained in for three days, Inflammatory action ensued. There was swelling, with soreness in the vicinity of the punctures. Upon removing the threads, however, these symptoms subsided. No normal pustule was produced. This essay was deemed almost an "experimentum crucis."

Experiment 6.—Jan. 18th. Went to Lexington and took quills and threads from a small-pox patient of Dr. Currier, in the same manner as was practised in experiment 5th. These were used in inoculating four cattle on the 20th of January. These essays were without success, although the threads were allowed to remain a week.

Experiment 7.—Jan. 25th. Received by express, from Dr. John A. Lamson, of Boston, some variolous virus from one of the crew of the slave yacht Wanderer. This matter was selected with care, and the case was a well developed one. These quills were used upon four or five cattle.

At the expiration of a week, there was one pustule developed out of the sixteen or twenty punctures. Took what seemed to be lymph from this one pustule, and tested it, without success, upon another cow.

It is natural to expect, that after so many careful experiments, conducted without success, the experimenter should begin to doubt. I questioned my ability to inoculate; but of this I was not convinced, as I had successfully vaccinated a considerable number of human subjects during my practice of medicine. Besides, I was told by some, who had tried the same experiments without suc-

cess, that it could not be done; that cow-pox must be found in a natural condition.

About this time, Dr. Currier, of Lexington, in conversation with my father, Dr. B. Cutter, stated that within the past ten years he had seen some cases of the cow-pox, occurring in the natural way upon the cow; and he further expressed his belief that such cases must exist in our vicinity at the present time. We should look for them in young cows, just after their second calving, and for the locality of the eruption upon the udder, between the hind teats. One case he mentioned as having about one hundred pock upon a remarkably clear udder. He took a large number of quills from them, and vaccinated three persons with them, viz: himself and two "Irish" infants. He did not succeed in his own case, but the children "took" severely. The remainder of the quills were mislaid, and he lost the opportunity of any further trials.

I was led to examine quite a number of cattle, in different localities, to find this disease in the natural state. I was incidentally surprised to find that a majority of the cattle examined had upon the teats and udder a considerable variety of pustular and horny skin diseases, so that if it is thought (and such is the opinion of the public, I believe) that *purer virus* can be got from the cow than from the human subject, it is an easy matter to explode this idle theory. While conducting experiment 7th, I found one cow with the hinder part of the udder covered with non-umbilicated pustules of the size and feel of a normal vaccine pustule.

Experiment 8.—I took the virus from the most developed of these pustules, and tried it on other cows. No infection followed, thus proving (if the operation was properly performed) that this was not the true vaccine pustule.

Experiment 9.—A repetition of experiment 8th, the matter being taken from a similar pustule near the vulva of another cow, and inserted into another animal. No infection resulted.

Experiment 10.—Still another cow was found with a disease upon the udder, simulating the natural disease. This ran its course in about a fortnight. There were pustules, non-umbilicated, full of white lymph. Vaccination with this lymph upon quills was tried upon another cow, and about a week later some of the crusts were rubbed up with water to the consistency of pus, and then pricked into crucial abrasions of the cuticle of a two-days'-old calf, by Dr. Chapin, and of a cow, by myself. These vaccinations have not yet had time to develop themselves. If they do not take, should we not be justified in calling these cases the spurious cow-pox referred to by Jenner?

Experiment 11.—Jan. 20th, 1860. Vaccinated four kine with ordinary vaccine, such as I was using in vaccinating the human subject.

Jan. 24th.—The spots all look as if taking.

Jan. 26th.—On two of the four kine, umbilicated postules, having, in one instance, a whitish summit, and in other instances being more swollen, with summits less white.

Jan. 27th.—One of the kine has three spots, half an inch in diameter. Bluish color, well marked. Took a large number of quills, and on the same evening sent specimens to the members of the Middlesex East Society, and to other physicians who had assisted in procuring variolous matter for the purpose of experiment.

Jan. 28th.—Dr. Chapin visited the animals. He was assured of the abnormal characteristics of the *quasi* pustules procured by inoculation, and was satisfied with the normal appearance of the pustules produced by the vaccination.

Experiment 12.—Jan. 23d, 1860. Vaccinated two cows with vaccine virus from a child, on the seton plan. Did not take. Failure probably due to the imperfect moistening of the threads.

Experiment 13.—Jan. 24th, 1860. Vaccinated, on the seton plan, four kine, with virus received by mail from Dr. J. D. Mansfield, of South Reading. No other results ensued than what would ordinarily be expected to follow the introduction of an uncharged thread.

Experiment 14.—Jan. 28th. Dr. Chapin vaccinated two kine with the virus he ordinarily uses upon the human subject. Both took well, and a large number of quills were obtained from them, which were used with general success.

Since the last experiments, I have often successfully vaccinated kine, both with the crust and the quill. The pustules have generally been large, and have matured upon the eighth or ninth day after vaccination. They vary in size somewhat, being generally very large, and not small. In some, a characteristic blue color of the pustule and vicinity is observed. This happens especially when the seat of vaccination is upon the part of the labium where the skin emerges into the mucous membrane. No constitutional effects upon the cows have been noticed.

From the account given in a late number of the *Boston Medical and Surgical Journal*, of the experiments of Dr. Martin, of Attleborough, Mass., some years ago, and the most unfortunate results that followed, I tremble at the risks I have been running, for if quills had been obtained they would have been used. It is only an instance of an overruling Providence. However, I am more confirmed, by Dr. Martin's account, in my opinion, derived from the above described experiments, that *vaccinia is not varioloid*, but that it is a *distinct affection*. I cannot explain the experiments of Dr. Adams, of Waltham, Mass., nor of Mr. Ceely, nor of the Russian physician, who profess to have succeeded in inoculating cows, and thus procuring the vaccine disease. I only know that Dr. Chapin and myself did not succeed. If some more successful operator should report and annul my assertions, I shall be very happy, as all I desire is the truth.

Three modes of introducing the variolous matter into kine were used—(inoculation.)

1. By quill and puncture with lancets.
2. By rubbing the charged points of quills upon crucial abrasions of the hairless cutis.

3. By introducing, in the form of setons, threads charged with the variolous virus. This is the easiest and most expeditious way of inoculating or vaccinating kine. There is but one struggle with the animal, and, once in, it stays in.

Vaccination on the cow has been practised in the following ways:

1. By the seton; this was tried twice and was not successful.
2. By quills. These, if fresh, generally succeeded.
3. By pricking into crucial abrasions of the cuticle, with a lancet, portions of a scab dissolved in water, until it is of the consistence of a thick paste. This has been uniformly successful upon man or beast; more so than any other mode I have practised.

I think I am justified in asserting that *any one can procure a vaccine pustule on the cow by vaccination,* as easily as it can be procured upon the human subject. This is the mode in which I obtain "*vaccine virus* from the cow."

The question has been asked whether the virus from the cow, thus obtained, is any better than the ordinary virus in use. To this I would reply, that in my opinion it is no better. A few statistics may throw light upon this. Out of nine primary vaccinations noted, with virus from the cow, six took the first time and three the second. Out of fifty-three secondary vaccinations noted, thirty-nine took the first time, thirteen the second time, and one the third time. One of the primary vaccinations taking on the second trial, occurred in a child half an hour old. One of the secondary vaccinations taking on the first trial, occurred in a lady 91 years old, who had been repeatedly vaccinated unsuccessfully. Another of these was vaccinated during the prodomic symptoms of varioloid, and both vaccinia and varioloid ran through their stages contemporaneously.

On the other hand, the writer vaccinated a child with quills from another infant, and they did not take. On the second trial, quills charged with virus from the cow were used. No effect. On the third trial, the third mode of vaccinating, with a scab from the cow, was employed. No result. On the fourth and final trial, the same mode of vaccinating, with a scab from a *child,* succeeded perfectly.

Some of the secondary vaccinations with virus from the cow procured pustules normal in appearance, and of a large size, despite a good scar of the primary vaccination. Constitutional effects have been produced in some cases. However, equally good pustules and similar constitutional effects have been produced, at the same time, by the ordinary virus in use.

Another thing—the ease with which the vaccine pustule is produced in the cow ought to give the profession confidence *in the matter in general use.* Thus the idea that it has "run out" by successive transmissions through human subjects is not supported by the present experiments.

Again, the idea that the vaccine disease is peculiar only to certain districts of Wales is not founded upon facts, as it has been

repeatedly observed in this country. It seems idle, then, to send to Europe for vaccine virus, when we have it at our very doors.

To conclude: The object of the present paper has been to show that vaccinia is not varioloid, or cow-pox modified small-pox. It has been attempted to prove this by the unsuccessful attempts to produce a normal vaccine pustule by inoculation, *while upon the very same animals, by vaccination with the virus in ordinary use,* the normal vaccine vesicle has been got easily. According to the authorities consulted, it is still a mooted question in regard to the subject in hand. But Von Bibra says distinctly that the cow-pox and the small-pox are two different diseases. The asserted fact that persons who have had the small-pox have been successfully vaccinated, seems also to substantiate our position.—*Boston Medical and Surgical Journal.*

Death in the Nursery.—Very dangerous presents are often made to children. It is the peculiar happiness of juveniles to test, in many homely ways, the strength, flavor, and combustibility of whatever toys are placed in their hands. The tendency to apply the tongue to all painted toys affords a temptation which only the strongest minded children can resist; and licking the face of a favorite doll, or the surface of a painted ball appears to afford pleasure which few can forego. Remembering these infantile idiosyncrasies, kind mammas and generous uncles should endeavor to ascertain that such colored toys as they give are not painted in mineral colors. Very serious accidents—if we mistake not, deaths—have occurred from licking the aerial bladders which were recently so popular in the nursery. Many of them were painted with arsenical pigments. A sad accident, which has just occurred at Lyons, points to another favorite toy as a possible source of the most serious misadventure. The *concierge* of the theatre there had presented a box of paints, as a new year's gift to his son, a boy about ten years of age. The little fellow was highly delighted with his new acquisition, and passed the whole evening in coloring a large portrait of Garibaldi. Most probably he wetted his pencil or his paints with his tongue; for, in the middle of the night he was attacked with a violent colic, and died in a few hours, evidently from poison. In the same way the drastic purgative properties of gamboge are not uncommonly developed to a very unpleasant extent. The unfortunate event above described affords an important caution, which will not, we hope, be lost.—*Lancet.*

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

A Practical Treatise on Fractures and Dislocations. By FRANK HASTINGS HAMILTON, M. D., Professor of Surgery in the University of Buffalo, &c. Illustrated with 289 wood cuts. Philadelphia, Blanchard & Lea.

This work, so long looked for, is received. It is a well-executed octavo of 758 pages. The first 484 pages are devoted to fractures, the remaining part to dislocations. While many of the wood cuts are recognized as old acquaintances, a large proportion are entirely new, well executed, and apposite. In a word, except that the binding is of cloth, and rather light, the execution is highly creditable.

We suppose that to engage in any thing like a formal notice of the author's part of the work, is entirely uncalled for, as his learning, his labors, his style, his zealous, yea enthusiastic, devotion to the subject which he discusses, are all matters in regard to which our readers are already informed. We have entertained the highest expectations in regard to this book—they are fully realized. We venture the prophecy that, by common consent, it will be allowed the highest place that any work on the subject of which it treats, has ever occupied. Reader, if, in regard to fractures and dislocations, you would understand your duty, your rights, your immunities, purchase the work, master it, practice its precepts, and, above all, lay claim to its recognition as a standard of practical results. We have no hesitation in saying that its author has done more than any other man, and we can hardly resist saying than *all other men*, to shield members of the profession from the humiliation and disgrace, the professional *damnation*, growing out of a successful prosecution for mal-practice. Our private opinion is, that if the author's labors work such results elsewhere as they have in Ohio, it will not be very long till gentlemen of the bar, and courts of justice, will conclude that the medical profession is too pure to be handled with unholy hands. Within the last five years we have been connected with full twenty cases of prosecution for alleged mal-practice, not as defendant—thanks to the charitable forbearance

of our patients—but as an expert. In most of these, the prosecution grew out of difficulties relating to fractures and dislocations. In *not one of them was a single farthing of damages recovered,* results that are largely attributable to the standard of attainable success provided the profession, by the author of this book, in his reports to the American Medical Association.

H.

A Medico-Legal Treatise on Mal-Practice and Medical Evidence, Comprising the Elements of Medical Jurisprudence. By JOHN ELWELL, M. D., Member of the Cleveland Bar. New York, John S. Voorhies. Cleveland, O., Alfred Elwell & Co. 1860.

This is the title of a work just issued, and already highly commended by the medical press. It is an octavo of 588 pages. It is a creditably executed volume in most respects. The copy before us is done up in law binding, and consequently does not match well in a medical library.

The author studied Medicine and practiced for a number of years. He has also devoted a corresponding period to the study and practice of Law. These facts, so far, designate him as in a favorable position for such an undertaking.

For years we have felt the want of such a work, and have heard the deficiency deplored by numerous gentlemen of eminent abilities, in the legal as well as the medical profession. Several years since, and during a number of successive years, we received letters from Dr. Stephen Smith, at that time one of the editors of the New York Journal of Medicine, asking co-operation in collecting materials for a work on mal-practice. The work, too, was announced, once or more, as in course of preparation. From having heard nothing of it for a long time, we suppose that the very laudable undertaking was abandoned.

Accordingly, we were much gratified on learning, as we did for the first a year or two since, that a gentleman supposed to be eminently fitted for it, had espoused the undertaking with a zeal which gave promise of an early completion. All our expectations, as to the prompt appearance of the work, are realized—the work is before us.

In the outset we are disappointed as to its scope. We had expected to find a large volume, plethoric with information on the hated subject of mal-practice, but, on a very superficial examination, we found it tailing off with a Part Second, on the general and rather hackneyed subject of Medical Evidence; and, after the fashion of a well-known marsupial quadruped, the tail end of it proved to be the big one. This latter part of the work, including a little more than 300 pages of well-leaded small pica, seems to cover a large part of the entire scope of the great subject of Medical Jurisprudence, including Evidence in General, Circumstantial Evidence, Experts, Professional Opinions, History of Medical Evidence, The Importance of Medical Evidence, Duties and Responsibilities of Medical Witnesses, Privileged Communications, Medical Books as Evidence, Insanity, Position of the Courts upon Insanity, Its Legal Relations, Partial Insanity, Delusion, Moral Insanity, Opinions of Laymen as evidence, What Mental Incapacity Invalidates a Will, General Principles and Observations on Poisons, Arsenic, Adjudicated Cases of Poisoning by Arsenic, Poisoning by Strychnia, Adjudicated Cases of, The Effect of Wounds in Producing Deaths, Rape, and Coroner's Office and Inquests.

The part of the work, however, in which we are more particularly interested, is that which relates to Mal-Practice. To this, ostensibly, 260 pages are devoted. A chapter of 30 pages is devoted to Druggists, Their Responsibilities, Leading Adjudicated Cases. This does not properly belong to the subject of Mal-practice. Another chapter of 18 pages on Abortion, Fœticide, belongs rather to the general subject of Medical or Criminal Jurisprudence. The first 54 pages are devoted to general considerations, such as General Principles of Law Applicable to Medical Men, The Inherent Elementary Difficulties of Medicine and Surgery, What definite Knowledge is Possible and Essential to the Surgeon, &c., &c. These, regarded as only indirectly related to the subject, and quite as appropriate in a work devoted to general Medical Jurisprudence, leave 158 pages devoted directly and especially to the subject of Mal-practice.

Now, while, to the fullest extent, we concede to the author the right and privilege of gratifying his own taste, and suiting his own convenience, as to the size and scope of his book, yet, under all the circumstances, whether it is *our* right or *our* privilege, or not, we

cannot but feel and express disappointment. The work has been extensively announced as one on Mal-practice. A part of it is devoted to that subject. The part so devoted, however, is but a small proportion of the whole. We expected to find a rich and varied repository of adjudicated cases. To our surprise, the whole collection, whether in reference to numbers, variety, or interest, does not amount to *half* as much as has transpired in the limited circle of our personal experience as an expert, within the period of five years.

We have carefully read most of the chapters devoted especially to the subject of Mal-practice, but, while it would be a most agreeable privilege to do so, we are not prepared to commend even this part of the book. Other duties, we frankly confess, have not allowed us to bestow the attention upon it that we desire to give. Accordingly, we are not without hope that unfavorable impressions, made by our imperfect study of it, are unjust.

So far as the legal character of the work is concerned, we cheerfully confess our incompetency to judge of its merits. In all that we have said, accordingly, and in all that we may say hereafter, we have reference only to it in its surgical aspect, and its general scope and character.

By way of exemplifying the style and learning of the author, his skill and ability in discussing surgical topics, and the degree of care bestowed upon the preparation of the work, we propose, for the present, to confine attention to Chapter VII, devoted to Malpractice in Dislocations.

This chapter commences with some wholesome suggestions in regard to the necessity of seeing cases of dislocation at the earliest possible moment—the occasional difficulty of diagnosing—the necessity of adequate anatomical knowledge, &c. His estimate of the value of anatomical knowledge is indicated by the following quotation: "Without a well defined idea of the form of the extremities of the bones, their mode of articulation, the ligaments by which they are connected and supported, the direction in which their most powerful muscles act; the man who attempts to adjust a dislocation, or a supposed one, works in the dark. When all these normal conditions are well fixed in the mind, any departure from it is at once detected, and the proper remedy applied."

Now while we unhesitatingly assent to all that he says as to the indispensableness of a ready and thorough knowledge of all the structures about the articulation, and without making further

mention of the glaring specimen of false syntax, contained in the last sentence, we are far from assenting to his view as to the facility with which dislocations are detected, as indicated in the closing part of the quotation. Both the diagnosis, and the reduction of dislocations, are frequently difficult in the extreme. If the articulations were subject to no injuries except dislocations, and the surgeon could select lean patients, prescribe the manner of causation, and see the case at once, it would, perhaps, be a thousandth part as easy for the surgeon, in actual cases, to "detect the departure," as for a man who never had a case, to do it in his study. But, we repeat, that frequently, in the diversities of circumstances in which these injuries occur, one of the most difficult things that a thorough anatomist and pathologist can undertake, is the recognition and reduction of a dislocation.

Accordingly, situated as country physicians are—debarred, to a great extent, from the means of studying pathology, being rarely allowed even the privilege of a post mortem examination—statutorily hindered from dissections, the only possible means of either acquiring or retaining the requisite familiarity with anatomy—serving communities which would subject them to professional martyrdom if they should make the attempt—situated, in every particular, so that it is out of the question for them to see more than a very limited number of cases in a life time—it is no matter of surprise that every physician of the country is not an accomplished surgeon, or that a great many dislocations, of small and large articulations, are neither recognized nor reduced. But we are digresssing.

The following consecutive paragraphs, found on page 107—9, are introduced for the purpose of exemplifying a kind of obscurity and want of accuracy, characteristic of the author's manner of handling surgical topics:

"A principal cause of difficulty, in the reduction of a dislocation of long standing, arises from the increasing *inorganic* contraction of the muscles engaged; also, the *new fibrous* adhesions which the new bone acquires; but this difficulty of reduction does not increase by lapse of time as rapidly as does that of *diagnosis*. The tension of the muscles is not supposed to increase after a few days, while the passive contractions of the muscles will demand an increasing force of extension by the mechanical agents employed; the progress of this additional resistance is slow, and will not, for many

days, present any serious obstacles to the elongation of the limb by pulleys or similar agents.*

"The ablest surgeons differ as to the length of time, after which a surgeon is no longer to be justified in trying to reduce a dislocation by the application of extension. Sir A. Cooper objects to any efforts being made to reduce a dislocation of long standing; and this time he places at two months for the humerus, and three for the femur; while Mr. Skey is not willing to limit the time *definite*, within nine months or a year, when all effort is to be abandoned. He claims to have reduced a humerus after three months.†

"In dislocations of long standing the cavity in which the head of the bone played becomes filled with new growth, the cartilages thicken, and the head of the bone becomes fastened in its new position, by fibrous growths, where it rests, in time, almost as firmly as in its original position.

"Where there is a mistake in the diagnosis, and extension is applied to a fractured limb, instead of a dislocated one, for obvious reasons the result may be serious to the patient and dishonorable to the profession, as well as rendering the operator making the mistake liable.

"An ignorant surgeon *will* sometimes apply the bandages around the elbow joint, to which he applies his extension in such a way that *it slips*, and *defeats* the whole proceeding, or he will bind the elbow to a right angle, in order to get an immovable joint, giving unnecessary pain, and throwing the whole extending force on the forearm. This is an inexcusable error; so, of the lower extremities, the same principles apply. Again, the extending force being applied to the elbow, instead of the wrist, the bone is, in fact, being drawn up by the pectoralis major and latissimus dorsi, while, through the medium of the *triceps extensor muscle, is being drawn down*, from which, the whole object is to separate and dislodge the head of the humerus. Both the scapula and the pelvis should remain as far as possible *dormant*, when extension is applied for the reduction of a dislocated femur or humerus.

"It is by reason of the neglect of simple points like these, that the profession, as well as the patient, often *suffer;* and because this is so, and the blameworthy are sometimes overtaken and punished, the idea becomes prevalent that whenever there is a failure to reduce the dislocation, the surgeon is to blame, let the circum-

*Skey's Operative Surgery, 73. †Medical Times, London, for June, 1848.

stances attending the case be what they may, and that he should respond in damages.

"All the medical profession asks, in respect to these cases, is, that the courts shall carefully draw the line between those cases where there is really ignorance, and those where the *impossibilities are so great* they can not be overcome by skill; and this the courts will do, if the truth can be properly brought before them."

The italics are ours, and are used to call attention to some of the striking inaccuracies with which these paragraphs abound, including a most unfortunate number of instances of false syntax. "Increasing *inorganic* contraction of the muscles." "New fibrous adhesions." "This difficulty of reduction" in a case "of long standing" "does not increase by lapse of time as rapidly as does that of *diagnosis*," which gradually becomes less and less difficult. "Mr. Skey is not willing to limit the time *definite*." "An ignorant surgeon *will* sometimes apply the bandages in such a way that *it slips* and *defeats* the whole proceeding." We are entirely unable to comprehend the agency attributed to the pectoralis major, latissimus dorsi, and triceps extensor, in the fifth paragraph. An anatomist can readily comprehend that they may have important agencies in some cases; but as to the cases in which these agencies are exerted, the surgeon, seeking light, is left in total darkness. "The profession as well as the patient often *suffer*." "Where the impossibilities are so great." "Through the medium of the triceps extensor, is being drawn," &c., &c., &c.

These are only a part of the inelegancies, obscurities and inaccuracies, contained in this quotation. A careful analysis, by the reader, will detect a number of others.

We regret to be impressed as we are in regard to the character of this production. A work from the hand of a master in Surgery, as well as Law, is greatly needed. We deeply regret our not realizing our hopes in reference to it. It is not characterized by the requisite familiarity with surgical science. Hence its inaccuracies. The author's style in handling surgical topics, strikes us as characterized, in a high degree, by obscurity. The work has evidently been very hastily prepared, and this we are disposed to adopt as the explanation of its ubiquitously present bad English.

H.

Dental Anomalies and their Influence upon the Production of Diseases of the Maxillary Bones. By. A. M. FORGET, M.D., C.L. D. MEMOIR crowned by the Academy of Sciences. Translated from the French. Philadelphia: Jones & White, 1860.

This is a beautifully printed pamphlet of 34 pages, with 5 fine illustrative plates. The work is intended to show the anatomical and physiological causes that predispose the jaws to organic lesions, requiring the intervention of art. The publishers propose to send it to purchasers, free of postage, on the receipt of forty cents in postage stamps. H.

Elements of Medical Jurisprudence. By THEODRIC ROMEYN BECK, M.D., L.L.D., and JOHN B. BECK, M.D. Eleventh Edition, with Notes by an association of the friends of Drs. Beck. The whole revised by C. R. GILMAN, M.D., Professor of Medical Jurisprudence in the College of Physicians, New York. Philadelphia: J. B. Lippincott & Co., 1860.

"After the death of Dr. T. Romeyn Beck it was ascertained that he had, with characteristic industry, collected a large amount of matter for a new edition of his treatise on Medical Jurisprudence." This matter was placed in the hands of Professor Gilman, who sought aid from the friends of Dr. Beck. Thus, in the united labors of *nine* gentlemen, of finished scholarship and rare abilities, we have a sufficient guaranty that the former reputation of this great work will be fully sustained. It consists of two magnificent volumes, making an aggregate of near 1,900 pages—prepared in a style eminently creditable to the house from which it emanates.

H.

PART FOURTH.

EDITORIAL AND MISCELLANEOUS.

PUBLICATION OF THE PROCEEDINGS OF THE OHIO STATE MEDICAL SOCIETY.—It has been intimated to us that our suggestions in the last number of the Journal, in regard to the publication of the proceedings of the State Society in the Medical Journals, is impracticable, and otherwise objectionable, on account of its necessarily making invidious distinction, in selecting any one Journal as a medium of publication. It is very easy to see that difficulties might grow out of selecting one, to the exclusion of others, but we see no necessity for pursuing that course—no reason why all may not be put upon the same basis.

1. There are four Journals in the State that are of such size and character, as that it is supposed each would gladly publish the authentic and official minutes, in their earliest issues, if they are furnished, without charge.

2. A gentleman presents a paper or report which the society deems worthy of publication. The society manifests its approval by a vote, requesting him to submit it for that purpose, allowing him to exercise his choice, or make his own private arrangements, as to the Journal or Journals in which it shall be published, provided, that it shall be done without expense to the society.

3. Occasionally a report or paper is too lengthy for publication in the Journals. The society should make it a rule to publish, on its own account, either separately, or with others issuing from the same meeting, all meritorious papers exceeding 30 pages of printed matter, provided they were declined by the Journals.

4. If a paper of less length than this, although requested for publication by the society, is declined by the Journals, it ought to be pretty satisfactory proof that it is not worth publishing.

Now it seems to us that while the present mode of publication amounts to a mere *lingering death,* and *indecent burial*—a kind of authoritative *suppression* of the papers and proceedings of the society—the adoption of this plan would secure their *prompt* and

extensive publication: while the present mode of procedure tattoos the proceedings in ragged habilaments that are calculated to make its warmest and most charitable friends ashamed of it, this method would dress it up and send it abroad in an intelligible and decent garb, such as is worn by the Journals of the State. In this way the sayings and doings of the society would be carried, not to 150 physicians, as at present, but to several thousands, in and out of the State; to all the Medical Editors in America, and many of those of Europe. In addition to this it would save the society, say $150 a year—a sum sufficient to make a very fair prize fund for meritorious essays, and at the same time encourage our medical Journals, the most creditable and vigorous institutions the profession of Ohio boasts of.

H.

THE USE OF CHLOROFORM IN MAKING ENTOMOLOGICAL COLLECTIONS.—We have had considerable experience in making Entomological collections, and have never found any method of killing specimens to be compared with that by the use of chloroform. Take a small sponge wetted with chloroform and put it in a well-stoppered bottle. An insect dropped into this bottle is quieted instantaneously. We have kept them over night, in these circumstances, when, on removing the stopper, signs of life became apparent immediately. To insure death, accordingly, they should be kept bottled for as much as twenty-four hours, at least. In this way the most delicate Arachnidan or Lepidopteran may be killed without the loss or soiling of feather.

H.

THE APPROACHING MEETING OF THE OHIO STATE MEDICAL SOCIETY.—Our readers are, no doubt, already aware that the next meeting of this important organization will occur at the Ohio White Sulphur Springs, a week later than usual, on account of the change in the time of meeting of the American Medical Association. The last meeting appointed 15 special committees, devolving special duties upon each. As the chairmanships of these committees, are

in many instances made at the request of the chairmen themselves, it is to be hoped that such committees will not do themselves and the society the injustice, and incur the disgrace of failing, in these circumstances, to engage in their work and make their report. If we mistake not, the public sentiment of the society is such as that self-constituted committees, of the dronish species, will be despatched with but very little ceremony. We give below these special committees in full:

SURGERY.—A. H. Baker, T. Garlick and A. Carey.

OBSTETRICS.—M. B. Wright, J. H. Rodgers and S. P. Hunt.

LIBRARY.—J. W. Hamilton, J. Helmick and J. C. Thompson.

AMENDMENTS TO REGISTRATION LAW.—John Dawson, S. M. Smith and J. L. Vattier.

ANESTHETICS.—S. Loving.

MEDICAL LITERATURE.—E. B. Stevens, H. J. Donaho and J. L. Drake.

OBITUARIES.—C. P. Landon, C. C. Hildreth and J. V. Schertzer.

CANNABIS INDICA.—R. R. McMeans, W. P. Kincaid and C. P. Landon.

URINARY DISEASES.—W. J. Scott, R. G. McLean and E. Sinnett.

UTERINE DISEASES.—S. M. Smith.

PRACTICE.—W. J. Scott, J. B. Potter and M. Thompson.

PRIZE ESSAYS.—S. G. Armor, C. McDermont and W. H. Lamme.

OVARIAN DISEASE.—J. W. Hamilton, W. H. Mussey and G. V. Dorsey.

DISEASES OF THE EYE.—A. Metz.

NEW REMEDIES.—J. J. Delamater.

TYPHOID FEVER.—J. Pomerene.

H.

CINCINNATI, Feb. 11th, 1860.

Editors of Ohio Med. and Surg. Journal:

I wish to make through your journal the following announcement to the Medical Profession of the State:

The 15th Annual Session of the OHIO STATE MEDICAL SOCIETY

will be held at the OHIO WHITE SULPHUR SPRINGS, on the *second Tuesday* of June, 1860.

The change in the day of meeting was made from the fact that the American Medical Association will meet this year on the *first Tuesday* of June, in New Haven, Connecticut.

W. W. DAWSON, M.D.,
Secretary of O. S. M. Society.

APPROACHING MEETING OF THE OHIO STATE MEDICAL SOCIETY.—The following note from A. Wilson, Esq., proprietor of the Ohio White Sulphur Springs, speaks for itself. Judging the future by the past, we feel fully warranted in assuring physicians that Mr. W. will do all he promises—*and more too.* H.

CINCINNATI, April 13th, 1860.

Prof. J. W. HAMILTON,
Editor Ohio Med. and Surg. Jour., Columbus, O.:

DEAR SIR:—I am making the most liberal arrangements for the accommodation of the Ohio State Medical Society at the Ohio White White Sulphur Springs. I would be greatly pleased to see, not only the medical gentlemen of the State there, but their wives and daughters also. Our arrangements are such as to insure them a delightful visit.

If you can, with propriety, call attention to this matter in your Medical Journal, you will place me under renewed obligations.

Very respectfully,
AND. WILSON, JR.,
Proprietor Ohio White Sulphur Springs.

DR. IGNATIUS LANGER AGAIN.—Since our last issue we have paid some attention to the tone of the medical press of the country in reference to the expulsion of this gentleman from the Scott County, Iowa, Medical Society. It is very evident that a very general sympathy for that gentleman has been aroused. Incidental to the affair, too, his history has been evolved, and proves to be a very enviable one. We are so strongly impressed that he has been foully dealt with, as to lead us to give, from the abundance

found in our exchanges, and as an act of simple justice to him, the subjoined, in defence. Dr. C. S. Sheldon, now of Springfield, Ill., in a letter to the New York Medical Press, states as follows :

"Having been a member of the Scott County Medical Society from 1857, until my removal to this place in September last, I am acquainted with the origin and history of the matter which led to the transactions of that society in relation to Dr. Langer, now the subject of public controversy. I feel it a duty which I owe to Dr. Langer, as well as to the Profession generally, to state my opinion on one point on which the public have not so full testimony.

"Owing to a multiplicity of duties preparatory to removal, I was unable to be present at the meeting of the Society when the case was first tried, as well as to the probability of my absence at the final trial, I was the more desirous to see the testimony which had been presented to the Committee of Investigation, on which their final action would be based. Such an opportunity was given, and upon examining it, I could find *no evidence* that, in any instance, the accused had ever resorted to any measures to secure patronage which in the least degree violated any rules of etiquette or ethics.

"I had an abundant opportunity of knowing Dr. Langer's bearing towards his fellow-physicians, and his conduct at the bed-side of the sick, in council or otherwise, and I am most happy in being able freely to say, I found him to be one of a generous nature, which ever led him to seek the good of the patient, with a high regard for the dignity of the profession—of liberal views, large experience and skill, characterised by a scrupulous observance of the rules of etiquette and medical ethics, and possessed of a zeal which was ever promoting the highest interest and honor of the profession.

"Now, shall such a one's character or reputation suffer damage without redress ?

"The consummation and development of this painful case of narrow minded jealousy I regard as the result of the unwise action (in my opinion) of the National Association, at its last meeting, referring cases of like nature for final settlement, back to the local Societies where they originated, thus cutting off all appeal to that body most capable of rendering an important verdict.

"Could an appeal have been made from the decision of the Scott County Medical Society, in the case of that Society *versus* Dr.

Langer, there would have been less precipitancy in arriving at such summary results.

"I trust Dr. Langer will receive an honorable acquittal, which he *justly deserves,* at the bar of public opinion, if not at the hands of his accusers.

"I write this unknown to Dr. L."

Dr. Brandeis, of Lousville, Ky., in a letter published in the Medical News, makes the following statement:

"MESSRS EDITORS: Finding from several of our medical journals, that Dr. Langer's case gives rise to a display of the most opposite views, as an old school-mate of his, and being thoroughly acquainted with his early career, I consider myself in duty bound to make the following sattement:

"Dr. Langer received his early education in Pesth, the capital of Hungary, and arrived at Vienna in the fall of 1842, where he attended clinical lectures and hospital practice up to 1846. He was at all times a diligent and hard-working student, showing always a particular predilection for surgery, obstetrics and opthalmology. He was always distinguished as one of the first in our class. He graduated in 1845 as Doctor of Medicine and Surgery, and Magister of Obstetrics, and received with the degrees all the honors connected with them. He then left for his native country (Hungary), where he, able as he was, immediately took an eminent stand as a practitioner, till the outbreak of the revolution in 1845, when he received an appointment as a surgeon in the Hungarian army; as such he filled one of the highest offices on the list. The army being defeated in 1850, he was compelled to leave his country, where, though young in years, he was loved by many, and highly esteemed by all who knew him.

"Though Dr. Langer has found some very able defenders, others again, not less able, condemn him. I should feel highly gratified if my humble remarks should serve to create a more favorable opinion in regard to my poor friend, who, from all I can learn, has only practiced in accordance with the precepts inculcated by our former tutors.

"Yours, etc., S. BRANDEIS, M.D."

A Case of Rupture of the Right Auricle of the Heart, in Labor. By S. Hudson, of Whittlsey, O.

In the March number of the Ohio Medical Journal of 1860, I noticed an extract from the London Lancet, in which was reported a case, in some respects similar to the following:

Mrs. S. M., aged 22, a primapara, was expecting to be confined. I was called to see her, December 9th, 1859; found her complaining of a severe pain in the left side, over the region of the heart. The pain was severe; she said she could not draw a long breath. I ordered a foot bath, bled her freely, applied sinapisms over the seat of the pain, and gave her an anodyne; after which she appeared quite comfortable until the evening of the 12th, when I was again summoned to see her in haste. I found her in the first stage of labor; her water had escaped, and to all appearance she was doing well. Her pains were regular, though not severe; and, upon examination, the os uteri was dilated to the size of a silver dollar. A loop of the umbilical cord protruded some two inches or more in length; the parts were moist, the pains regular, and everything, as far as related to the mother, promised a speedy and favorable termination. I endeavored to return the funis, within the cavity of the uterus, but did not succeed. I then stepped into an adjoining room, thinking what I had better do in order to save the child; when my attention was quickly called to my patient by her attendants, who said, in great alarm, "Come, Doctor; she has fainted!" I stepped to the bed, and found she had thrown herself forward, so that her head was partially off the bed. I had her immediately placed in the horizontal posture, and felt for her pulse, but it was gone; put my ear to her chest, and her heart had ceased to beat! This was all the work of a moment: with a single gasp she had expired. The pains were not so hard but that she continued to laugh and joke, until the last one, when she said: "My pains are growing harder. Oh, I shall die!" and died. I told the friends that she was dead—probably died from rupture of some important blood-vessel; perhaps an anurism of the aorta.

The next question was, what was to be done with the child? It was struggling for its life. I told the husband, and mother of the lady, that I could save the child, and that I felt it my duty so to do; but in this I was overruled by a number of very officious old ladies, who soon gathered in, and declared it would be more humane

to let the child go with the mother, than to have it brought to the world through such unnatural means as I proposed; and besides, perhaps the mother had only fainted, and might yet come to life. Being without counsel, and not positive of the occasion of her death, I had to yield; though, I confess, with many unpleasant feelings, for I was confident that I might have saved the child, and that it was my duty to do so.

Through the kindness of the friends I was permitted to have an autopsy on the following day. Dr. Smith, and others, assisted. In opening the chest, the first thing to which our attention was directed, was the pericardium; it being filled to its utmost capacity, resembling, in dimensions, a large inflated bladder. From this we took a common sized tin wash-bason full of coagulated blood, and probably a pint or more of serum escaped into the cavity of the chest. The heart was then carefully removed; and upon examination the right auricle was found ruptured near the descending vena cava, its texture being very thin and soft, and easily torn—the rupture being sufficiently large for the passage of my thumb. The child presented nothing abnormal, more than a livid appearance: was a beautiful little girl, and ought to have been saved.

Notes on some of the Chemical Reactions of Atropine. By T. G. Wormley, M.D.

Atropine, as is well known, is the active principle, or alkaloid of *atropa belladonna*, or deadly night-shade. The crystallized alkaloid dissolves in concentrated nitric acid, without any change of color, upon heating the solution, and after cooling, the addition of a drop of chloride of tin solution gives a copious white deposit; without heating, the tin salt produces no change. Concentrated sulphuric acid dissolves it with a very slight yellow color, and the addition of nitrate of potash yields no change.

In the following experiments crystallized atropine was dissolved by the aid of acetic acid:

1. Tannic Acid.

1. $\frac{1}{100}$th grain of atropine, in one grain of water, gives, with tannic acid, an immediate dirty white precipitate, readily soluble in potash.

2. $\frac{1}{1000}$th, an immediate bluish precipitate.
3. $\frac{1}{2500}$th, gives a very good precipitate.
4. $\frac{1}{5000}$th, after several minutes a just perceptible cloudiness.

2. Terchloride of Gold.

1. $\frac{1}{100}$th, gives a copious light yellow precipitate, readily soluble in excess of acetic acid.
2. $\frac{1}{1000}$th, an immediate greenish yellow precipitate.
3. $\frac{1}{2500}$th, gives much the same as 2.
4. $\frac{1}{5000}$th, no indication.

3. Bichloride of Platinum.

1. $\frac{1}{100}$th, gives a pretty good dirty yellow amorphous precipitate.
2. $\frac{1}{500}$th, no indication.

4. Carbazotic Acid.

1. $\frac{1}{100}$th, gives an immediate light yellow amorphous precipitate, which dissolves in a few drops of acetic acid.
2. $\frac{1}{1000}$th, in a few seconds a light greenish precipitate, which, after a little time, is quite copious.
3. $\frac{1}{2500}$th, after several minutes, no satisfactory indication.

5. Iodine in Iodide of Potassium.

1. $\frac{1}{100}$th, gives an immediate copious brownish amorphous precipitate, which completely dissolves in a few drops of a strong solution of potash.
2. $\frac{1}{1000}$th, a good brownish precipitate, insoluble in acetic acid.
3. $\frac{1}{10000}$th, much like 2.
4. $\frac{1}{20000}$th, an abundant red-brown precipitate.
5. $\frac{1}{50000}$th, at first a yellowish, after a little time a very good red-brown precipitate.
6. $\frac{1}{100000}$th, gives a very satisfactory precipitate.
7. $\frac{1}{500000}$th, still perceptible.

6. Bromine in Bromohydric Acid.

1. $\frac{1}{100}$th, gives an immediate copious bright yellow amorphous precipitate, which soon becomes a mass of twig-like crystals. If there be deficiency of reagent used, the precipitate will dissolve, but is reproduced upon the farther addition of reagent. The precipitate is insoluble in potash solution.

2. $\frac{1}{1000}$th, an immediate yellow precipitate, insoluble in acetic acid.

3. $\frac{1}{10000}$th, gives an immediate greenish yellow crystalline precipitate.

4. $\frac{1}{20000}$th, much like 3.

5. $\frac{1}{50000}$th, no satisfactory indication.

The reaction of the above reagent is quite characteristic, it being the only one that will give a distinct crystalline precipitate with atropine; whereas, with most, if not all the other alkaloids, the reagent gives an amorphous deposit.

7. Potash.

1. $\frac{1}{100}$th, gives a good white amorphous precipitate, which readily dissolves in much excess of the reagent.

2. $\frac{1}{500}$th, gives no indication.

Ammonia behaves about the same as potash, however, the precipitate is more soluble in excess of ammonia than in potash.

With a solution, holding 100th of its weight of atropine, neither of the following reagents will give a precipitate: Gallic acid, iodide of potassium, sulphocyanide of potassium, chromate of potash, chloride of mercury, ferro, nor, ferricyanide of potassium, acetate of lead, nor chloride of barium.

Columbus, Ohio, April 16th, 1860.

An Easily Applied Treatment of Short-Sightedness.—Short-sighted persons, in looking at distant objects, usually blink, i. e. bring the upper and under eyelids nearer together, covering a part of the cornea. A finger is applied to the outer commissure of the lids in this position, and they are drawn outward a little. By this procedure the cornea is flattened, and the axis of the eye shortened. In consequence, the object looked at will appear surprisingly distinct in its outlines, often as much so, as if seen through suitable concave glasses. The pressure thus exerted through the lids on the eye must only be slight; when too great, the eye becomes presbyoptic, and vision dulled. Practice soon insures the exercise of the proper degree of pressure. This simple, not painful, and entirely harmless proceeding, is to the short-sighted of the same service as the use of the monocle or single eye-glass. It enables him

to see distant objects sharply defined, to read signs, names of streets, numbers of houses, to recognize actors on the stage, or persons in a large hall, etc. The vast advantage of this "easy method" over concave glasses consists, (besides in being always at hand,) in its having not only palliative, but also curative effects. It has certainly lessened short-sightedness in our own case. The cornea partially regains through the slight but oft repeated pressure on it, the natural retractility, lost through strong pressure from within; its convexity no longer increases, but rather diminishes, as also the antero-posterior axis of the eye. It is not to be overlooked, how very easy of execution this gymnastic eye-exercise is. It subjects the individual to so little inconvenience and interruption of occupation, that it is soon performed from habit, and almost unconsciously.—*Phil. Reporter.*

On the Duration of Life among Medical Men.—From the statistics of over 1000 persons of different occupations, who died within the last 100 or 150 years, at an age of at least 80 years, collected by Faber, and communicated to the *Würtemberg Correspondenzblatt*, we learn that among these long-lived persons, there were:

1. Authors and learned without special profession, 86.
2. Statesmen and diplomatists, 96.
3. Clergymen and theologians of all beliefs, 150.
4. Artists, 167, painters, engravers and sculptors, 72; poets, 42; musicians and composers, 26; actors, dancers and circus riders 9, among whom were Franconi at 98, Noverre 105, and his two sons at 82 and 83.)
5. Military 190, (army 159, navy 31.)
6. Naturalists and physicians, 192; (naturalists and physicians not in practice, 58; practicing physicians 134, of whom there were 3 over 100, 15 between 90 and 100, and 116 between 80 and 90 years old at their death.)

Now, though we do not accord to these statistics completeness in themselves, nor regard them as proper foundation for generalizations, we may surely draw from the above combination of ages the satisfactory result that the duration of life among physicians is by no means as limited as so many authors (*König, Villermé, Deneufville, Hufeland, Escherich, Zeeman, etc., etc.,*) affirm.

Sanitary Science.—The sanitary condition of the city of New York has for a long time been such as to excite the astonishment and indignation of those who took the slightest interest in the welfare of their fellow beings, and it appears that efforts are at last being made to remedy this growing evil.

In the report of a committee of the State Assembly, we are informed that several attempts have been made to secure some action upon this important matter, but without success until now, and it will appear from the following statements that it is quite time to act. An examination of the sanitary statistics shows that the ratio of mortality to the population is 1 to 36.9 in New York; 1 to 40.2 in Brooklyn; 1 to 48.1 in Boston; 1 to 50.2 in Baltimore; 1 to 52.9 in Providence; and 1 to 63.6 in Philadelphia. If New York had been as healthy as Philadelphia, 9000 persons would have been saved. The causes which produce this excessive mortality affect particularly the young. In Surry, England, ten children in every eighty-six die under the age of one year; in London, one in every five; in New York, ten in every twenty-six, making the mortality of the last place double that of London. This rate is greater than that of any city, large or small, and is mostly owing to the utter neglect of public sanitary measures.

The causes are found both without and within the dwellings of the people, particularly within. The tables of the report exhibit this fact in the most striking manner. Some diseases have increased at an almost incredible rate, particularly cholera infantum and congestion of the brain. Many of the diseases enumerated in the tables referred to are the direct result of deficient ventilation and sunlight, filth of person and domicil, of cellar-dampness and darkness, foul gases, &c. It is said that nearly 200,000 persons in the city live under ground. Although laws have long existed, which might to a certain extent be brought to bear upon this evil, the enforcement of them has for many years been confided to men incompetent to appreciate either their nature or value. From 1804 until 1844, the City Inspector was almost invariably possessed of a medical education. Since that period, the incumbents have invariably been without medical knowledge.

The immense number of poor emigrants from Europe, who crowded into the city, swelled for a time the bills of mortality, but this element cannot explain the progressive increase, which is still so fearfully obvious.

Boston has long afforded a pleasant contrast to New York, and its sanitary condition is confided to the care of competent physicians. Still it is necessary that the people themselves should understand the importance of, and be interested in, the subject of public hygiene. To secure this desirable end, a number of gentlemen met at the house of Josiah Quincy, on the evening of April 7th, to hear the report of a committee previously appointed to draft a constitution for the organization of a sanitary association. The following officers were chosen: *President,* Jacob Bigelow; *Vice Presidents,* John Ware, Prof. W. B. Rogers; *Corresponding Secretary,* G. H. Snelling; *Recording Secretary,* Josiah H. Curtis; *Treasurer,* Otis Clapp; *Directors,* Josiah Quincy, Jr., Dr. Henry G. Clark, Dr. Edward Jarvis, Rev. E. E. Hale, Wm. S. Bullard, Thomas Russell.—*Boston Medical and Surgical Journal.*

Cicatrix-like Streaks on the Skin of Pregnant Women·—Opinions as to the time of appearance, frequency, and other peculiarities, and medico-legal importance of these streaks, are so unsettled and conflicting, that we gladly hail the excellent review of the subject by Crede, of Berlin, one of the editors of the "*Monatsschrift fur Geburtskunde und Frauenkrankheiten.*" We have prepared for our readers the following propositions which he has established (Monatschr., &c., Nov., 1859, p. 323 et seq.):

1. The streaks on the abdomen more or less extensively exist in the great majority of pregnant females. They appear but very seldom, however, during the first half of pregnancy—frequently not until the last month, or the last but one.

2. Soon after delivery they change in appearance, becoming gradually less evident, unless the skin is made tense, but never entirely disappear.

3. In some cases they do not appear during pregnancy, and sometimes no trace of them can be found after repeated pregnancies.

4. Sometimes they appear for the first time at the second or third pregnancy, or else new streaks are added to the old.

5. They make their appearance also, without the existence of pregnancy—in consequence of diseases producing a rapid and considerable extension of the skin (especially in dropsy, therefore).

6. The quite similar streaks on the breasts, and the anterior surface of the thighs, occasionally, also on other parts of the body, as the buttocks, calves of the legs, &c., merit the same attention as those on the abdomen.—L. Elsburg, M.D., of New York.

Persulphate of Iron as a Hæmostatic.—Monsel, of France, first proposed the use of this excellent hæmostatic, and as its use is becoming more general, we give our readers *his* process for its preparation:

"Place in a porcelain capsule 100 grammes of distilled water, and 10 grammes of sulphuric acid; raise the mixture to the boiling point, and then add 50 grammes of protosulphate of iron. After complete solution of the latter, pour, in small quantities, into the boiling liquid 16 grammes of nitric acid at 35 degrees. When the rapid discharge of orange-colored vapors has ceased, add, in portions, 50 grammes of the protosulphate of iron, the solution of which will produce again reddish flames, and will cause the excess of nitric acid to disappear. The volume of the liquid is then raised to 100 grammes, by the aid of distilled water, cooled and filtered."

Monsel suggests that 100 grammes of this solution be treated with a few grammes of linseed oil, and that the mixture be shaken three or four times in twelve hours. There is thus obtained a perfectly neutral solution, having no nitrous odor, and susceptible of preservation for a very long time.

The solution is limpid, of a very dark brownish red, inodorous, and with an extremely astringent, but non-caustic taste. It marks 45 degrees of the *pese-sels*. When concentrated by boiling, it assumes the consistence of honey, and if, in that condition, it is spread in thin layers on plates of glass, and dried at a temperature of 100 degrees Fahrenheit, it can be obtained in reddish-yellow scales, transparent, like those of the citrate and tartrate of iron.—*Journal de Phar. et de Chim.*

Dr. Horace Green has resigned the presidency of the New York Medical College, and Drs. Peaslee and Flint have resigned their professorships in the same institution.

Tongue Removed by the Ecraseur.—In the *New Orleans Medical News and Hospital Gazette* for February, Dr. Choppin reports a case of removal of the tongue, for cancer, with the ecraseur. The operation lasted fifteen minutes, and was accompanied with no hæmorrhage. . This operation is usually accompanied with considerable hæmorrhage, and it is highly probable that the ecraseur is, in such cases, a valuable surgical appliance.—*Am. Med. Monthly.*

Hydatids of the Liver, making their way out along the Hepatic Duct into the Alimentary Canal.—A rather unusual case of hydatid disease of the liver, which ended fatally, was very recently under Dr. Barlow's care at Guy's Hospital. The patient was a man who was admitted with symptoms of hepatic disease and local peritonitis; he had had jaundice a month before his admission, which passed off. He survived but a short time; and, on making a post-mortem examination, a large hydatid cyst was discovered at the upper part of the liver, which had burst into the hepatic duct, its contents passing thence to the common bile duct and into the duodenum. Had circumstances been otherwise favorable, a recovery might have ensued, as this was an effort of nature to get rid of a visceral parasitic invasion. Dr. Wilks stated that he had met with one similar case, where the hydatid membranes passed into the alimentary canal, some of them coming away by stool, whilst others were ejected from the stomach during the act of vomiting. This termination of hepatic hydatids is by no means a common one. Sometimes they burst into the peritoneum, or into the chest. But in the human subject, although they are occasionally diagnosed during life, we have seldom any evidence to depend upon beyond symptoms of chronic hepatitis. The enlargement, however, has been known to simulate ascites, and tapping has been performed to afford relief. In Dr. Barlow's patient the true nature of the disease was not diagnosed, because he had not been sufficiently long under observation.—*Lancet*, Feb. 25, 1860.

Dr. Livingstone.—News has been received of this gentleman and his party down to December 12th, when they were at the mouth of the Kongoue. The party had all suffered from fever, but were completely recovering and in good spirits.—*Lancet,* March 10.

Acupressure.—In an editorial in the *Medical Times and Gazette* (Feb. 25, 1860), it is stated that this method of arresting hemorrhage is fast coming into use among surgeons. "In Mr. Adams' case, which we noticed last week, the superiority of the needle over the ligature has been most apparent. The needle was removed forty-eight hours after the operation, and there was not a sign of bleeding or suppuration; while the ligature has remained, as usual, acting as a seton during the sloughing process it sets up. It should be observed that no part of the needle was left exposed on the raw surface of the wound; it was introduced half an inch above the cut point. This is a great advantage in amputation; for the cut surfaces can be brought into apposition, free at every point from the contact of any foreign body. Our provincial hospital surgeons are taking up the method in a most creditable manner. At Dundee, Carlisle, Greenock, and Liverpool, it has been applied with great success; and now that Mr. Adams has led the way in the metropolis, at a small hospital, his example will be followed sooner or later in the larger establishments, where the surgery partakes more of the character of stereotype. Mr. Bickersteth, of Liverpool, writes most warmly as to the facility of acupressure and its probable great results."

Successful Treatment of Vesico-vaginal Fistula.—Nine cases of vesico-vaginal fistula have been operated on in the Glasgow Infirmary during the last year, by Bozeman's method; and three others in private practice there. Of the twelve cases recorded, ten were completely cured by one operation, and two were unsuccessful. One of these two cases failed after repeated attempts; and the other was complicated by profuse hemorrhage from the bladder.—*Lancet*, March 3, 1860.

Seasoned Beef—Preservation of Milk.—M. Gaultier de Claubry, in the January number of the *Annales d'Hygiene et de Medécine Legale*—the like of which journal is not to be found either in Great Britain or in the United States—tells, in a short paper on the "Preservation of Milk," of the perfection to which the

preparing of meats for long voyages is now carried. The following is a remarkable example of this fact: Cans of meat, prepared in England, were sent, under seal of the Admiralty, to the West Indies, where they remained two years. On their return they were embarked on board the ship *Fury*, on the occasion of the voyage of Captain Parry to discover a north-west passage, and were, in part, kept in this vessel when it was blocked up in the ice, and abandoned by its crew. The expedition under Captain Ross, in search of these adventurous navigators, which was itself detained three years in these regions, found, at the spot where the *Fury* had been lost, a considerable quantity of these cans of preserved meat, which had been rolled about in different directions by the white polar bears, and which furnished very timely aid to the men of the relief vessels.

Escaping at length from this icy prison, Captain Ross returned to England, carrying with him some of the cans of meat, one of which he presented to the Queen, and others to the Admiralty, the Royal Society, the Academy of Sciences of Paris, and the Society of Encouragement of National Industry. M. Gaultier de Claubry was charged by this last Society with the duty of reporting on the condition of the gift which it had received, after the lapse of a period of *sixteen years* from the time of its being put up. The seasoned beef contained in this can was tasted by the members of the council of the Society, many public functionaries, pupils of the Polytechnic School, and the private pupils in the laboratory of M. Gaultier. There was not a dissentient voice in the declaration that the meat was as good as if it had just been prepared.

Of the different modes of preserving milk, the following is, M. Gaultier thinks, entitled to the preference. All liquids, he premises, dissolve, in variable proportions, the air to which they are exposed. Water, for example, contains a thirtieth of its volume, which, disengaged by heat, presents this remarkable feature, that it contains more oxygen than the atmosphere, and that the last portions hold more than 32 in 100. Milk forms no exceptions to this rule, and we can easily understand how this gas will accelerate change in this fluid.

The process for the preservation of milk, as rocommended by M. Mabree, consists in heating it in a sand bath, or in vapor, until air ceases to be disengaged, and when introduced into appropriate vases or bottles, after its temperature has been reduced, the milk must

still be deprived of air. The vases are made of galvanized sheet iron, to the necks of which are soldered leaden tubes, by which they communicate with a reservoir filled with milk, previously heated and cooled in the mode just prescribed. The vases filled, the terminal tubes are closed with strong pincers, so as to flatten them completely; they are then cut and soldered at the ends. Objections have been made to the materials used for holding the milk, on the ground of the lead communicating an unpleasant flavor to the liquid, and the opacity of the vases not allowing us to see whether it is in a fit state of preservation.

Another and simpler process consists in heating the milk in glass bottles, on the necks of which conical lead tubes are soldered: the mouths of these, so soon as the milk boils up to them, and has parted with its air, are closed. The milk, in cooling, descends somewhat, and allows of its surface being seen through the neck of the bottle.

Milk thus preserved may be kept without change for an indefinite period. Of its dietetic value in a great variety of circumstances, especially on board ship, in long voyages, or in camp, one can easily conceive without entering into details on the subject. It is not always possible to prevent a partial separation of the cream on the upper part of the liquid. To remedy this inconvenience, it will be necessary to shake well the bottle, and submit its contents anew to heat. Sometimes even globules of butter will be found in the neck of the bottle.

Remarkable Case of Swallowing a Set of Artificial Teeth.—The following case is reported in the March No. of the Dental Cosmos, by M. Whillden Foster:

A gentleman of Wilmington, Del., thirty-five years of age, sanguine temperament, swallowed his artificial teeth at midnight on Wednesday. Physicians were called in, who fished for them, also tried the usual remedies, but all to no purpose; it was then concluded to let nature take her course (not doubting in the least that *her* course would be *death* to him,) when, to the astonishment of all, and his most unbounded delight, after a very painful and laborious stool, he found himself again in the possession of them. This did not take place until the following Monday, making the *round trip*

in five days. They were on gold plate, quite heavy, made eleven years ago. He remarked to me that he has not slept with them in his mouth since the catastrophe.—*Louisville Medical News.*

THE OPERATION FOR VESICO VAGINAL FISTULA IN PARIS.—Dr. Battey says, in a letter to the *Atlanta Medical and Surgical Journal,* that, upon one of his clinic days, "Nelaton essayed the performance of Bozeman's operation for vesico-vaginal fistula—worked for two hours, as I am informed, very industriously in the location of three points of suture, and left the case finally in a condition which he acknowledged to be quite unsatisfactory. A cure was not anticipated, but what the result was, I have not yet learned. Nelaton is unquestionably a superior operating surgeon—perhaps has no successful rival in Paris—but seems, like all Parisian surgeons, to encounter special difficulties in this essentially American operation."

The complications of the operation in the manner probably attempted by the French surgeon, were, it may be supposed, the cause of the apparent awkwardness and delay. We have seen the operation successfully performed by simply uniting with the all-sufficient wire-suture, without the least haste, in thirty minutes, and suppose that in very favorable cases much less time would be required.

Extraction of a Bar of Lead from the Stomach. By JOHN BELL, of Wapello, Iowa.

One of the most extraordinary operations in the annals of surgery has been performed recently in the extreme West, and deserves to be recorded on account of its boldness, successful result, and for the judicious method of procedure adopted by the surgeon. We find the case reported in full in the Boston Medical and Surgical Journal.

A man named Bates, on Christmas day, in Wapello, Iowa, performing some tricks with a bar of lead, *accidentally swallowed it.* He went at once to Dr. Bell of that place, but being tipsy his story

was not believed, and for *four days* he continued at his work, until the violent vomiting, abdominal soreness and loss of strength, compelled him to desist. The physician, finding that it was, indeed, true that he had swallowed the bar of metal, determined upon the operation of Gastrotomy, which is described as follows by Dr. Bell:

" *Operation.*—Wednesday, Jan. 3d. Present, Drs. Robertson, Cleaves, Graham, Taylor, and myself. The patient seemed much as on the previous evening. He had great prostration and faintness on attempting to rise. The patient having been properly placed and secured, chloroform was administered. It produced, at first, some nausea, and he threw up a quantity of black, fœtid, watery fluid. As soon as insensibility ensued, I made an incision from the point of the second false rib to the umbilicus, dividing the skin and cellular membrane; thence through the abdominal muscles to the peritoneum, which I laid bare the whole length of the incision. I then made a minute opening at the lower end of the section, through the peritoneum, passed in the director, and with a probe-pointed bistoury divided it through the entire length of the incision. The division of the peritoneum produced a spasmodic contraction of the muscles of the abdomen, and a large quantity of the omentum and bowels was ejected from the orifice. Increasing the chloroform controlled the spasm, and I replaced the bowels as speedily as possible, and passed my hand inward and upward through the incision, grasped the stomach, and immediately *discovered the bar of lead* and its position. It lay in a direction from right to left, the upper end resting against the walls of the stomach to the right of the cardiac orifice; the lower end in the greater curvature of the stomach, to the left of and below the pylorus. As it was impracticable to reach the upper end, I seized the bar between my thumb and middle finger, and with the forefinger on the lower end of it, I retraced it upward and backward, for the purpose of making the incision in the stomach as high up as possible. I then passed a scalpel in, along the side of the forefinger as a director, and divided the coats of the stomach immediately at the end of the bar, making the incision parallel with the muscular fibres, and not larger than to admit of the removal of the lead. I then introduced a pair of long forceps, seized and drew out the lead, and placed the stomach in its natural position. The external orifice was closed with the ordinary interrupted suture

and adhesive straps, a compress applied, and a roller around the body.

The time occupied in operating was twenty minutes. Considerable delay was occasioned by the protrusion of the contents of the abdomen, which had to be replaced before the operation could proceed. As soon as the effects of the chloroform passed off, a quarter of a grain of sulphate of morphia was administered, and the patient left in charge of a judicious medical attendant."

The after treatment of this case was simple, the patient was kept quiet—permitted to eat but little, and the operator had the pleasure of seeing him walking about on the 14th day convalescent.

The length of the bar was 10¾ inches, and its weight 9½ ounces.

Chloroform in Sleeplessness.—Fonássagrives recommends (*Bull. de Thèr.* LVI. p. 401) 5–10 drops of chloroform in mucilaginous mixture, in agrypny when opiates are ineffectual or contra indicated.

Relief of the Tenesmus of Dysentery.—Ansaloni, in his inaugural dissertation, reports the very favorable results obtained by Dr. Leclerc, of Tours, by the combined employment of belladonna, or strammonium and calomel, in dysentery. A large plaster of extr. of belladon. or strammonii (ʒiss) is placed on the regio pubis, and every morning and evening for a few days, a grain and a half of calomel administered. The belladonna and strammonium may be alternated. Tenesmus soon yields to this treatment, as well as all other symptoms of dysentery.

New Edition of Hippocrates.—"We learn," says the *London Athenæum,* "that a new and splendid edition of 'Hippocrates' is now in course of publication at Utrecht, under the auspices of the Royal Academy of Sciences of the Netherlands, and with Dr. Frans Zacharias Ermerins for its editor. It is contemplated, indeed, by the Academy to add to the works of Hippocrates those of the other ancient medical writers whose reputation may entitle

them to such a distinction. The Academy has been fortunate in securing the services of Dr. Ermerins to the criticism and interpretation of Hippocrates. Prefixed to the first volume, we find a preface and copious prolegomena, in the former of which the writer explains the necessity that there existed for a new edition of the Physician of Cos, notwithstanding the labors of Mr. Littré, whose edition of "Hippocrates,' by the way, although begun in 1839, is not yet completed."—*Med. and Surg. Reporter.*

Even in England, where we have long enjoyed a continental reputation for indulging our eccentricities, if a man wander many hairs' breadths from the beaten path, two surgeons will lock him up, and a judge and jury, upon the testimony of a footman that his master was not exactly like other people, will set aside his will.—*London Times.*

Light appears to have an influence in the transformations of amylaceous matters, dextrine, etc. By its sole influence it so modifies amylaceous matters as to turn them into sugar and dextrine when they are exposed to the solar rays at a temperature of 100 cent. It also would appear that animal starch (glycogenous matter) is transformed into sugar more rapidly and more abundantly under the influence of light than in the dark. It is very remarkable that animal fecula remains in the liver of frogs without becoming starch during winter, just as the vegetable fecula ceases its transformations. In these animals, also, the greatest richness in sugar coincides with the period of the ripening of fruits. The glycogenous matter may remain unchanged in the liver, like starch in tubers and grains, if the frogs are entirely removed from the light; then no sugar is formed. In this way we may sxplain the rapid disappearance after birth of the glycogenous matter which exists so abundantly in the skin of the fœtus.—*Report by M. M. Corvisart and St. Victar.*

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PART FIRST.

ORIGINAL COMMUNICATIONS.

Notes on some of the Chemical Reactions of Veratrine. By T. G. Wormley, M.D.

Pure veratrine was dissolved in water by the aid of just sufficient hydrochloric acid. The veratrine when acted upon by nitric acid, exhibited a just perceptible yellow tint, and dissolved with a perfectly colorless solution.

In the following experiments, a small drop of a saturated solution of reagent was applied to a grain of the veratrine solution:

1. Potash.

1. $\frac{1}{100}$th, grain of veratrine in one grain of water, gives with a small drop of potash solution, a copious dirty white flocculent precipitate, not readily soluble in excess.

2. $\frac{1}{1000}$th, gives a very good precipitate, readily soluble in excess.

3. $\frac{1}{5000}$th, gives a perceptible cloudiness. A very small quantity of reagent must be used, otherwise no precipitate will be produced.

2. Ammonia.

This reagent behaves in the same manner as potash. Its limit is the same.

3. Chromate of Potash.

1. $\frac{1}{100}$th, gives a good light yellow amorphous precipitate, insoluble in excess.
2. $\frac{1}{500}$th, a very slight trace.

4. Bichromate of Potash.

1. $\frac{1}{100}$th, a copious yellow amorphous precipitate, insoluble in excess; readily soluble in acetic acid.
2. $\frac{1}{500}$th, a quite distinct reaction.
3. $\frac{1}{1000}$th, no indication.

5. Sulphocyanide of Potassium.

1. $\frac{1}{100}$th, gives a white flocculent precipitate, insoluble in excess.
2. $\frac{1}{500}$th, a pretty good precipitate.
3. $\frac{1}{1000}$th, no satisfactory indication.

6. Carbazotic Acid.

1. $\frac{1}{100}$th, a copious greenish yellow amorphous precipitate.
2. $\frac{1}{1000}$th, a very good greenish precipitate.
3. $\frac{1}{5000}$th, gives a quite distinct greenish cloudiness.

7. Terchloride of Gold.

1. $\frac{1}{100}$th, gives a canary yellow amorphous precipitate, which is not readily soluble in acetic acid. If the precipitate be acted upon by several drops of a strong potash solution, it does not entirely dissolve, nor does the mixture darken. If the precipitate be heated, it dissolves leaving some gum-like masses; upon cooling, the precipitate is reproduced without any darkening of the solution.
2. $\frac{1}{1000}$th, a good canary yellow precipitate, readily soluble in a few drops of solution of potash with a clear solution.
3. $\frac{1}{5000}$th, a greenish yellow precipitate, which dissolves by heat with a clear solution, and is reproduced upon cooling.
4. $\frac{1}{10000}$th, a quite good reaction.
5. $\frac{1}{40000}$th, gives a quite distinct cloudiness.
6. $\frac{1}{60000}$th, a just perceptible cloudiness.

8. Bichloride of Platinum.

1. $\frac{1}{100}$th, a dirty yellow amorphous precipitate.
2. $\frac{1}{500}$th, no indication.

9. Iodide of Potassium.

1. $\frac{1}{100}$th, a copious dirty white amorphous precipitate.
2. $\frac{1}{500}$th, a slight cloudiness.

10. Iodine in Iodide of Potassium.

1. $\frac{1}{100}$th, a copious reddish brown amorphous precipitate, entirely soluble in a few drops of potash solution.
2. $\frac{1}{1000}$th, a red brown, soluble in one drop of potash solution.
3. $\frac{1}{10000}$th, a good red-yellow amorphous precipitate.
4. $\frac{1}{40000}$th, a good green yellow.
5. $\frac{1}{70000}$th, gives a quite obvious greenish precipitate.
6. $\frac{1}{100000}$th, the precipitate is still perceptible.

11. Bromine in Bromohydric Acid.

1. $\frac{1}{100}$th, a copious yellow amorphous precipitate.
2. $\frac{1}{1000}$th, a good dirty yellow precipitate.
3. $\frac{1}{10000}$th, gives a greenish yellow precipitate.
4. $\frac{1}{50000}$th, a quite good precipitate.
5. $\frac{1}{100000}$th, a quite perceptible precipitate.

12. Ferrocyanide of Potassium.

1. $\frac{1}{100}$th, a copious dirty blue flocculent precipitate, readily soluble if excess of reagent is not used.
2. $\frac{1}{500}$th, a good cloudiness.

13. Ferricyanide of Potassium.

1. $\frac{1}{100}$th, a copious greenish precipitate, soluble in excess of reagent.
2. $\frac{1}{500}$th, no indication.

14. Tannic Acid.

1. $\frac{1}{100}$th, a copious dirty white amorphous precipitate.
2. $\frac{1}{1000}$th, much like 1.
3. $\frac{1}{10000}$th, a pretty fair precipitate.
4. $\frac{1}{40000}$th, a just perceptible cloudiness.

15. Sulphuric Acid.

This test should always be applied to veratrine or its salts in the dry state.

1. $\frac{1}{100}$th grain of veratrine, if touched with a drop of strong sulphuric acid, and gently warmed, immediately changes to a beautiful crimson; the color is not destroyed by heat, but very slowly by stirring in the mixture a small crystal of bichromate of potash.

2. $\frac{1}{1000}$th, much like 1.

3. $\frac{1}{10000}$th, if the veratrine deposit be heated, and then a small drop of the acid be allowed to flow upon it, it first becomes yellow, which almost immediately changes to crimson red, and dissolves, giving a solution of a quite perceptible red.

4. $\frac{1}{20000}$th, treated as in 3, the deposit gives a very satisfactory reaction; the solution has a just perceptible tint.

5. $\frac{1}{60000}$th, the deposit a just perceptible redish color.

There is no doubt but if the veratrine deposit was collected in one point, a much smaller quantity than that above stated would give a very distinct reaction. Sulphuric acid is much the most characteristic test we possess for the determination of veratrine.

There was a failure to obtain, in the crystalline form, any of the precipitates produced by any of the above reagents.

Extraction of Veratrine, by Ether and Chloroform.

1. The Chloride of Veratrine.—One grain of pure veratrine, dissolved in 100 grains of water by the aid of hydrochloric acid, and then the solution agitated for several minutes with an equal volume of *ether*. The ether then drawn off and evaporated to dryness, leaves a residue of $\frac{3}{100}$ of a grain of chloride of veratrine.

One grain of veratrine in 100 grains of water, by the aid of hydrochloric acid, and agitated with an equal volume of *chloroform*, and the chloroform evaporated to dryness, leaves an opaque vitrious residue of $\frac{33}{100}$ of a grain of chloride of veratrine.

2. Pure Veratrine.—One grain of veratrine, dissolved by hydrochloric acid in 100 grains of water, and the solution rendered slightly alkaline by potash solution, gives a copious white precipitate so dense as to make the liquid almost gelatinous. If now, the mixture be mixed with an equal volume of *ether*, and agitated for several minutes, and then the ethereal solution evaporated to dryness, it leaves a transparent vitrious residue of $\frac{91}{100}$ of a grain of pure veratrine.

When one grain of veratrine is treated as above and agitated with an equal volume of *chloroform*, and the chloroform solution evaporated to dryness, it leaves a perfectly transparent vitrious residue of $\frac{97}{100}$ of a grain of pure veratrine.

Columbus, O., June 15th, 1860.

American Medical Association—Thirteenth Annual Meeting, held at New Haven, June 5th, 6th and 7th, 1860. *Reported expressly for the Medical and Surgical Reporter, by* DR. J. SOLIS COHEN.

FIRST DAY'S PROCEEDINGS—MORNING SESSION.

The members of the Association convened at the Chapel of Yale College, and at 11 A. M., were called to order by the President, Henry Miller, M. D. of Kentucky.

A prayer was offered by Prof. Fisher, of Yale College.

Dr. Jonathan Knight, of Connecticut, on behalf of the Committee of Reception, welcomed the members of the Association to the hospitalities of the city. He spoke in graphic terms of the benefits accruing to the profession and to the world by the annual gatherings of the Association, which kept up a good feeling between distant members of the profession; he recommended such modes of action as would advance the general interests of the profession. He gave an epitome of the gradual progress of medicine, and dwelt at length upon the improvements in surgery, made during the present century, alluding to the operation of lithotripsy, the ligation of the large arteries, and the introduction of anesthetic agents. The address was listened to with profound attention, and greeted with marked applause.

Dr. Chas. Hooker, Professor of Anatomy and Physiology in the medical department of Yale College, as Chairman of the Committee of Arrangements, addressed the Association as follows:

"*Mr. President and Gentlemen of the Am. Med. Association:*—It is with unwonted gratification that the Committee of Arrangements welcome you to the city of New Haven. And we only bespeak the common feeling of our citizens in saying that we are delighted—nay, proud—to receive you as our guests. We feel that any city is highly honored to become the chosen place of meeting of the Am. Med. Association—a select delegated national Congress, representative of forty thousand members of a learned and humane profession. As a city, we appreciate this honor, and should be ungrateful did we not receive you with a generous and cordial welcome. You meet, gentlemen, for a great and noble object—for the promotion of science, vitally linked with the interests of humanity. Your meetings have a most happy influence in strengthening these ties by which the great Fraternity of Medicine are

bound in social compact. Another salutary incidental benefit of your meetings, result from their affording an annual period for relaxation and social enjoyment.

"Too many physicians prematurely break down in their career of usefulness, in consequence of unremitted and arduous application to their professional duties; and many of you now present, whose exhausted physical and mental energies need recruiting, could hardly have been drawn away from your routine of toil and care, but for your sense of bounden duty to aid in the great object of this Association. We congratulate you, therefore, brethren, on this annual recurrence of our National Medical Jubilee. In behalf of the Faculty of Yale, we welcome you to the halls of this ancient seat of learning, in which you are invited to hold your sessions; and in behalf of the citizens generally of New Haven, we tender you the hospitalities of our city.

"We hope that to all of you this meeting will be a season of pleasant social intercourse long to be remembered for the many friendships here formed; and we trust that the harmony and wisdom of your counsels will efficiently promote the great benevolent objects of our organization."

He then gave notice to the members that arrangements had been made to accommodate the meeting of the different sections as follows:

On Anatomy and Physiology—in Prof. Woolsey's lecture room.

On Surgery—in the Geological Cabinet.

On Practical Medicine and Obstetrics—in the Geological Cabinet.

On Chemistry and Materia Medica—in the Chemical Laboratory.

On Meteorology, Medical Topography, Epidemic Diseases, Medical Jurisprudence and Hygiene—in the Chemical Laboratory.

At the last annual meeting in Louisville, it had been recommended to divide the Association into the above sections, in order to facilitate the transaction of business.

After the calling of the roll by the Secretary, Dr. S. M. Bemiss, of Ky., on motion of Dr. John Atlee, all the medical officers of the Army or Navy present, were invited to take seats in the Association.

The committee appointed at the last meeting to prepare a code of parliamentary rules for the government of the Association, stated that their report, chiefly the work of Dr. Chas. A. Lindsley, of

Conn., was ready, and as it was brief, arrangements had been made for its immediate commitment to the press and distribution among the members, if adopted by the Association.

After some debate, the report was laid on the table.

A recess was here allowed, to permit the delegates from the different States, to choose their respective member of the Committee on Nominations.

At a quarter before one, the Association was again called to order, and the following gentlemen declared the Committee on Nominations:

District of Columbia—Dr. Boyle.
Maryland—C. C. Cox.
Kentucky—R. I. Breckenridge.
North Carolina—James H. Dixon.
Tennessee—I. S. White.
Delaware—Lewis P. Bush.
Louisiana—Austin Flint, jr.
Minnesota—D. W. Hand.
Georgia—N. W. Brown.
Massachusetts—D. Humphreys Storer.
Maine—Amos Nourse.
Indiana—Daniel Meeker.
New Jersey—J. S. English.
Rhode Island—James H. Eldridge.
New Hampshire—George H. Hubbard.
Illinois—A. S. McArthur.
Mississippi—U. G. Williams.
Michigan—C. L. Ford.
Pennsylvania—Wilson Jewell.
Iowa—D. L. McGugin.
Ohio—Robert Thompson.
Missouri—M. A. Pallen.
Vermont—Charles L. Allen.
Virginia—James H. Connag.
Connecticut—L. N. Beardsley.
South Carolina—H. R. Frost.
New York—H. D. Bulkley.

A motion was passed to invite the members of the Legislature of Connecticut, then in session at New Haven, to be present at the afternoon session, as the address of the retiring President, which

would then be delivered, would contain points of medico-legal interest.

On motion, the Association adjourned to meet again at 3 P. M.

AFTERNOON SESSION.

At 3 P. M., the Association was called to order by Vice President, H. F. Askew, of Delaware.

Gov. Buckingham and Lieut. Gov. Catlin, of Conn., on the platform, were introduced to the meeting by the chairman.

The retiring President, Dr. Henry Miller, of Ky., then read his valedictory address.

Our space does not permit us to give the address in full. We subjoin a few extracts.

"Gentlemen of the American Medical Association:—It affords me a great satisfaction to greet you as representatives of the American medical profession in this beautiful city—the city of Yale College—a city whose intelligent legislation has made ample provision for the education of her children. Let us accept our annual meeting on this classic ground as a token that our deliberations shall favor medical education, the improvement of which was the fundamental design of our National Association. In order that this great object should be readily obtained, I need not remind you how necessary a spirit of moderation is to all our discussions, and most fervently do I hope such a spirit prevails, to preside over all our sessions.

The duties of the President of this Association are exclusively parliamentary. He is not even empowered to fill vacancies in subordinate committees, much less to give information to the Association of the state of the profession, which, it may be presumed, has occupied his thoughts. During my term of office I have been obliged to assume the power of filling vacancies; and in the performance of this, my last official act, I shall take the liberty of adverting to topics of high concern, not only to our profession, but to the public at large.

"At the last meeting of the Association, a Committee on Criminal Abortion made their report, which was received and referred to the Committee on Publication. The resolutions appended to the report were adopted, and the President and Secretary authorized to bring this important subject, in the form of a memorial, before Congress, and the several legislatures in the different States

of the Union. By reference to the proceedings of the last annual meeting, it will be seen that the committee were requested to continue their labors, and take such measures as were necessary to carry into effect the spirit of the resolutions. The chairman opened a correspondence with me early last winter, offering to place at my disposal extra copies of the report, and also various papers published by him in the *N. A. Med. and Chirurgical Review*, containing all the matter necessary for the several legislatures to know, to act properly in the premises. I am happy to acknowledge my obligations for this gentleman's valuable assistance, not only in furnishing the documents he did, but in preparing a memorial, and an address to the State Medical Societies, asking their co-operation to bring this matter before the legislatures of their respective States. The memorial was transmitted, in January last, to the President of the United States and to the Governors of each of the States and Territories of the Union, the legislatures of several of the States being at the time in session. Of the disposition which has been made of these addresses I am not informed, but may indulge the hope that their Excellencies have submitted them to their various legislatures, or will embrace the earliest opportunity of doing so. From want of knowledge of the address of all the State Medical Societies, I was forced, in some instances, to direct to prominent medical gentlemen in various States, through whom I hope the papers reached their destination. I would here recommend that measures be taken by this Association to obtain annually a list of the various medical societies, and the address of their officers, to be published in our transactions. Besides permitting facility of correspondence, this would tend to bind our medical organizations more closely together, and render them more effective in the great work which it is proposed to accomplish through their instrumentality.

"Having laid before you, gentlemen, the measures which have been taken to carry into effect the resolutions adopted at the last meeting of the Association on this interesting subject, which involves the honor of our profession and the great interests of society, it becomes my duty to warn you that obstructions may be thrown in your path, which may require years of ceaseless vigilance and unremitting effort to overcome the popular ignorance on this subject, while many in your own ranks are to be watched. Popular sentiment either winks at abortion in the earlier periods of

fœtal development, or only admits it as an indiscretion on the part of the mother, or rashness on the part of the practitioner. This opinion is known to be based upon erroneous views of physiology, derived, doubtless, as all such errors are, from the false speculations of physiologists and naturalists of a former age. Would a poor, delicate-minded mother, who would shrink from the very idea of committing an immoral act, relieve herself of that which would otherwise become a burden upon her, were she informed by her physician of the enormity of the crime? The truth should be generally promulgated, that from the moment of conception, the new being, microscopic though it be, is endowed with all that appertains to the development of man. It is at once an individual being, and no more a part of the mother, though she bears it within her, than it is of the father; and is no more dependent on her during its development in the womb, than after birth, when it draws its sustenance from her breast. Were this taught universally, no woman, however degraded or fallen into vice, would go so far as to permit the destruction of her offspring.

"It is difficult for legislation in a free country, where the people are the source of all political power, to rise higher than popular sentiment and intelligence. But it is the duty of all our legislatures, in questions which can only be determined by the science of medical jurisprudence, to endeavor to elevate popular sentiment and remove the ignorance upon this point, rather than to degrade themselves. The necessity of legislation upon this point has been clearly pointed out by the chairman of the committee, and plausible suggestions for the enactment of a suitable law have been prepared by him. We hope the appeal made will not have been in vain."

The subject of medical education has occupied a large share of the attention of the American Medical Association since its first organization. It was indeed the urgent necessity of reform in the administration of its important interest to the profession which called forth from the Medical Society of the State of New York, a design for a National Medical Association, composed of delegates from the different medical societies and colleges, to meet in New York in May, 1846, and afterwards adjourned to meet in Philadelphia, in May, 1847, where it was resolved into the American Medical Association, which has since been in vigorous existence. Unfortunately there have been differences of opinion on the points

of medical education, between those of our profession who occupy the position of professors and those who do not, and I claim to be a mediator between them, as I have been with them, man and boy, for upwards of forty years, engaged in the study and practice of medicine, and for twenty-one years professor in a school, which at one time ranked third in the United States, in regard to the number of its pupils. Having laid aside the professorial garb two years ago, and become again one "among the herd," I am qualified to act as a "go between."

The system of medical education adopted in the United States, is derived from our British forefathers, and recognizes the right of the great body of the medical profession to preside over the initiation of candidates for its honors and emoluments.

On the continent of Europe young men are transferred from the gymnasiums to the academies to receive their first lessons, as well as the finishing instruction in the profession of their choice. The different effect of this system from our own is calculated to do injustice to our institutions. The medical schools of this country have always, at least in theory, admitted that it is at once the high privilege and duty of all regular members of the great medical body to receive properly qualified and educated young men into their offices as students, to prescribe their studies, and to prepare them to profit in the largest manner, by the advantages they can nowhere obtain so well as in a properly regulated medical school. The founders of our first medical school were those who first learned from private instruction before they went abroad to the schools.

Here the history of several distinguished medical men, who received their first medical education in the private office of a practitioner, was alluded to.

These men established on this side of the Atlantic, an institution, in which the American education by private tuition might receive its finishing touch and reward, without the risk of the dangers incident to travel in the old world.

Previous to the establishment of a medical school in Philadelphia, most of the students of medicine received their education in the shops of practitioners, where medical lore was imparted, and the practical part of the apothecary carried on; and after the school was started, a Philadelphia graduate was looked upon as something superior, and more reliable than the less favored multitude of physicians.

If, according to our American system, medical education has its beginning in private tuition, and complete in medical schools, it follows necessarily that it is in the function of the schools to receive their students at the hands of private teachers engaged in the practice of their profession, and to require vouchers that they have gone through the proper course of necessary training.

To dispense with this preparatory course would be a violation of the contract between public and private individuals, and also be an egregious wrong to the students themselves, by an attempt to instil into their minds an instruction which, by previous culture, they are not prepared to receive.

The true distinctions between physicians are not between professors and laymen, but between public and private teachers of medicine. Were medical instruction among us entirely committed to the schools, as in most European countries, this distinction would not exist.

Dr. Miller went on to say, that enough precaution was not taken even in selecting professors; that many teachers were unfit for their position, and their examinations of students were a farce. The qualifications of professors ought to be insisted on as well as the qualifications of students.

He spoke of the practical essays of Dr. Drake on medical education, published in 1832, in which he complained of the necessity of a higher standard of medical excellence, and the extraordinary increase in the number of medical colleges in the United States, and stated that one cause is a want of due care in the selection of professors, by which, at present, the standard of excellence is such as to bring into responsible position those of even less than mediocrity in medical lore and literature.

The necessity of reform in the selection of teachers and the examination of candidates, was fully insisted on.

The Secretary, Dr. Bemiss, of Kentucky, then read additional names of delegates whose credentials had been examined by the Committee on Credentials since the morning meeting.

The Nominating Committee here reported the following names as those of officers for the ensuing year. The gentlemen nominated were elected by acclamation :

President—Eli Ives, Conn.

Vice-Presidents—Wilson Jewell, Pa.; A. B. Palmer, Mich. ; Jos. P. Logan, Ga. ; Jos. N. McDowell, Mo.

Treasurer—Casper Wistar, Pa.

The Chairman then appointed the following escorts to the officers elect:

For Escort to President—Jonathan Knight, Conn.; Dixi Crosby, N. H.

For Escort to Vice-Presidents—W. C. Snead, Ky.; Wm. Brodie, Mich.; Edward Warren, Md.; R. C. Foster, Tenn.; K. J. Bowditch. Mass.; Lewis A. Sayre, N. Y.; Jno. L. Atlee, Pa.; Austin Flint, Jr., La.

A number of communications were then read, inviting the members of the association to visit the carriage factories of Messrs. J. & D. Cook & Son, and Messrs. Laurence, Bradley & Pardee, and also an invitation from Wm. H. Russel, M. D., to visit the evening drill and parade of the students in his Collegiate and Commercial Institute.

These were accepted, and hours set apart in which the members could visit the above places without interfering with attendance on the meetings of the Association.

Business was then suspended while the officers elect were conducted to their places by the Committees of Escort, and severally introduced to the Association by the Chairman, Dr. H. F. Askew, of Del.

Dr. Eli Ives, President, in taking his seat, made a short address, in which he stated that, in giving thanks for the honor conferred upon him, he would be ungrateful not to publicly thank the profession for all he was and all he possessed. All his property and reputation had been derived from his profession, and therefore deserved his thanks. His father had been a physician, and one of the founders of medical societies; he had two sons and one grandson, physicians. He had always loved and enjoyed his profession, and to all present he would repeat what Dr. Rush remarked to his class in 1801 and '2: "Gentlemen, if you don't like your profession, the sooner you leave it the better." He had been practicing medicine longer than any present, and that when he could no longer do so, he would himself be carried to the bed side.

Dr. Wilson, Jewell, of Pa., stated that it is not customary for Vice-Presidents to make addresses on their election, or to preside over the deliberations of the electing body. The first he would not attempt, but at the request of the President (who is too aged and feeble to preside), he would attempt the latter, and all he asked

was allowance for any of his infirmities. He would endeavor to preside with strict impartiality.

Dr. N. S. Davis, of Ill., introduced the following resolutions, to carry into effect the arrangement adopted at the last meeting of the Association, to facilitate the transaction of business in the consideration of scientific matters by the division into sections :

Resolved, That the general meetings of the Association, after this day, shall be restricted to the morning sessions, and the afternoon sessions, commencing at three o'clock, shall be devoted to the hearing of papers and discussions in the several sections.

Resolved, That each section shall choose its own officers, and make its own rules of order.

Resolved, That all essays, voluntary communications and reports, except those from the officers of the Association, and the committees on medical education, medical literature, and the committees on prize essays, shall be first presented or referred to the appropriate section and receive its recommendation, before they can be referred to the committee on publication.

The first and second resolutions were adopted. The reading of the third resolution called forth considerable discussion, during which several amendments were proposed and withdrawn. Some members thought that everything appearing in the printed account of the transactions, should undergo proper revision and alteration by a special committee; others were of opinion that the Association was not responsible, as an association, for everything that emanated from them, and therefore addresses and papers should appear in the original language of their authors without alteration. Several gentlemen refused to submit their papers to any revision, and stated that if the Association did not choose to print them as they were, they would publish them themselves at their own expense. Over an hour was consumed in this discussion, when, on motion, the resolution was laid on the table to give the mover an opportunity of so altering it as to meet the views expressed by the different members.

On the recommendation of Drs. Timothy Child and David S. Conant, Dr. Wm. B. Little, of San Francisco, Cal., was admitted a member by invitation : there being no representative from his section of the country, a member of the Association. The following gentlemen were appointed a Committee on Voluntary Communications :

E. D. Force, Ky.; Thos. W. Blatchford, N. Y.; N. D. Davis, Ill.; —— ———, Rochester, N. Y.; Dr. Renchberger, Pa.

The Treasurer, Caspar Wister, M. D., of Pa., then made his report:

He reported that out of a list of 2,000 names, he had only some 200 annual subscribers to the volume of Transactions, and these were obtained only after the persisting solicitations of the Treasurer, addressed to each permanent member, announcing the publication of the last volume of the Transactions. Of the printed volumes of Transactions, there were still on hand, for sale at the following prices: years 1846 and '7, of the organization of the Association, 50 cents each.

Vols. 1, 2, 3, and 4, out of print.

Vols. 5, 7, 8, 9, collectively as a set, $5 00, separately $2 00 each.

Vols. 6, 10, 11, at $2 00 a volume.

Vol. 12, at $3 00.

Cash on hand, April 15, 1859, - - - -	$651 00
Received from delegates for last volume of Transactions, - - - - - - -	2,430 00
On hand, - - - - - - - -	597 61

The report was accepted, and referred to Committee on Publication.

On behalf of the Committee on Publication, Dr. Caspar Wister reported that the delay in the appearance of the last volume of the Transactions had been caused by the delay of the authors of several articles in returning corrected proofs of their articles, the proofs having in one instance been detained nine weeks, and in another fourteen weeks. The committee hoped some action would be taken to prevent a similar occurrence in the future. The cost of printing the last volume of Transactions had been $1,659 00.

There were remaining on hand, of the volumes containing the proceedings of the first meeting of the Association, 45 copies; vol. 5, 241 copies; vol. 6, 11 copies; vol. 7, 51 copies; vol. 8, 212 copies; vol. 9, 242 copies; vol. 10, 165 copies; vol. 11, 152 copies; vol. 12, 497 copies.

The report was received, and referred to the Committee on Publication.

No other committees being prepared to report, the Association, on motion, adjourned.

Second Day—Wednesday, June 6, 1860.

The Association was called to order at the Chapel of Yale College, at 9 o'clock A. M., by Vice President Dr. Wilson Jewell, of Pa. The minutes of the previous day's proceedings were read and adopted. On motion of Dr. Gardner, of Mass., the rules of order were suspended, to allow V. P. Dr. Logan to offer a resolution. Dr. Logan then tendered his resignation as Vice President, which was accepted.

The Committee on Education, through Dr. Reese, of New York, Chairman, made their report.

The report urged the adoption of a higher standard of qualifications than are now considered requisite. The present winter sessions were considered too short, and they thought the session should continue six or nine months, and there be fewer lectures on each day.

They urged the introduction of chairs on various subjects, now not taught in medical schools, such as hygiene, medical literature, &c.

The report considered sufficient attention was not paid to clinical (at the bedside) instruction, and that the required curriculum of study should be extended to various collateral branches, without a knowledge of which no man could properly perform his duties as a physician, even though he possess diplomas from regular medical schools; and they urged upon the Association the importance of taking prompt and efficient action to increase the standard of the profession, as whatever reform was to be instituted, should emanate from this body, and the matter should be taken in hand immediately, instead of appointing successive committees, thus incurring a year's delay, again and again.

The Committee desired to be considered as having no desire for any fastidious reform, but only desired such changes as would increase the general interests of the profession.

In conclusion, the Committee offered the following preamble and resolutions, which they desired to be considered as part of their report:

PREAMBLE.

Whereas, It is the deliberate judgment of the American Medical Association, that the time has fairly come for the introduction of improvements into the present system of medical education, which

shall elevate the existing standard of qualification for the Doctorate, and especially for securing and encouraging a higher degree of attainment in the science and of skill in the art of medicine than has been heretofore accessible to students in our country, and

Whereas, This body of American Physicians is regarded by our fraternity everywhere, as the acknowledged head and representative of the medical profession in the United States, and it is therefore looked to for prescribing the terms and qualifications of those who are henceforth to be admitted and recognized into our fellowship as brethren and equals in the profession; therefore,

Resolved, That it be hereafter regarded as an indispensable pre-requisite to enrollment as a student of medicine in the office of any regular physician, that the party shall be at least seventeen years of age, of good moral character and habits, and shall have received a good English, classical and mathematical education, and be able to read and translate the Latin language, and have an elementary knowledge of Greek, so far, at least, as to be able to trace the derivations from it to the English language.

Resolved, That this same requisite be made indispensable before matriculation in any regular medical college can be allowed, and that the faculty of such college, and the preceptor of such candidate for enrollment, be required to ascertain such qualification by actual examination, and to certify thereto.

Resolved, That the term of study in the office of a regular practitioner, including attendance upon lectures, be and is hereby extended to four years, the last year to be mainly employed in receiving clinical instruction in medicine, surgery and midwifery.

Resolved, That three full courses of lectures in a regularly incorporated college, or other body of lecturers recognized by the Association, be required of all candidates for the degree of Doctor of Medicine. Said candidate may be admitted to examination after three full years of study, on all the branches which they have been required to study, except clinical medicine, as above.

Resolved, That the period of instruction in every college be extended through the full term of nine months in each year, and that this time be divided into two sessions, the first to be chiefly occupied in instruction in the elementary branches only, and the latter to the practical and more complete branches. Those in attendance upon the former to constitute the junior class, and that upon the

latter the senior. Not more than four lectures to be delivered on each day in either of the departments, and that each lecture be preceded by a recapitulation, in the form of question and answer of the lectures of the day before.

Resolved, That the number of professors in each college should be increased, so as to bear some proportion to the largely increased number of branches, a knowledge of which is necessary. This increase to be made in addition to those holding clinical chairs.

Resolved, That the examination of all the students for matriculation, which admits them into the junior class, shall be repeated before their entrance into the senior class, either by the Faculty, or by examiners appointed by them for the purpose, who shall certify in the one case to the fullness of their preliminary education, and in the other to their improvement, under courses of instruction in the junior or elementary department. Admission to the senior class should be contingent upon this latter examination. Similar examinations should be required at the commencement of each session, as to the improvement made in the preceding term.

Resolved, That the final examination for graduation, if made by the Faculty, should be in the presence of each other, and should be witnessed and certified by a board or committee of equal numbers, to be appointed for the purpose by each State Society, within whose bounds any college may be located, or by the Faculty, and without whose approval the degree should not be conferred. Due notice to be given by the Faculty of the time and place for the examination, and each candidate to be separately examined.

Resolved, That no medical college be recognized by the American Medical Association to be complete in its organization, and prepared to furnish the requisite instruction, which does not either possess a hospital of its own, or which has not made arrangements with a hospital containing not less than eighty beds, for the students of the college receiving regular clinical instruction, before being licensed to practice.

Resolved, That the so-called "College Clinics" cannot, in any useful or practical sense, be looked on as furnishing an adequate substitute for the clinical teaching required.

Resolved, That this Association regard with marked disapproval a practice which prevails with some of the Faculties of the School, viz: Of examining those students who are candidates for a de-

gree, before the expiration of the regular session, and while the lectures are still in progress.

Resolved, That the titles of the several chairs in a school, as announced in its curriculum, ought to indicate a real teaching of the branches thus virtually promised to be taught, and not be assumed merely in conformity with further usage, or to gratify the temporary whim of a professor, to have an appendage to the title of his chair, while in the very next year he may abandon, and consent to its being appended to some other chair, or to its being omitted entirely in the next annual announcement. We may instance this, attaching physiology to anatomy, the latter being the substantive branch, and of itself taking up the whole time of the professor during the entire session, which is still too short for its legitimate purposes. Still more common and misleading is the appendage of diseases of women and children to midwifery, and that of medical jurisprudence at one time to materia medica, at another to midwifery, at a third to chemistry.

All of which is respectfully submitted.

(Signed) D. Meredith Reese, Ch'n, (N. Y.)
John Bell, (Phila.)
W. K. Bowling, (Tenn.)
Z. Peletier, (Mich.)
Chas. Fishback, (Indiana.)
Committee on Medical Education.

On motion of Dr. McDowell, (Mo.) the Association went into Committee of the Whole, to consider the above resolutions, and after some debate arose, reporting progress, and asked leave to sit again.

Report of Committee on Medical Literature was referred to the Committee on Publication, without reading.

The Committee on Nominations reported that they recommended the next meeting of the Association to take place in Chicago, Ill., on the first Tuesday in June, 1861.

They nominated the following officers:

Secretaries.—S. G. Hubbard, Conn.; H. A. Johnson, Ill.

Committee of Arrangements.—N. S. Davis, Ill.; G. W. Freer, Ill.; De Laskie, Willon, Ill.; E. Andrews, Ill.; H. W. Jones, Ill.; Thos. Bevans, Ill.; J. Bloodgood, Ill.

On Prize Essays.—Dan'l Brainard, Ill.; D. L. McGuigan, Iowa; M. L. Leaton, Mo.; Jno. Evan, Ill.; A. L. McArthur, Ill.

Committee on Publication.—F. G. Smith, Pa.; Caspar Wister, Pa.; S. C. Hubbard, Conn.; R. J. Breckenridge, Ky.; Edward Hartshorne, Pa.; H. F. Askew, Del.

Vice President.—In the place of Dr. Logan, resigned, R. D. Arnold, Ga.

These officers were elected by acclamation.

Committee on Prize Essays reported they had received no essay, in their opinion, worthy of awarding a prize; which report was referred to the Committee on Publication.

The rules of order were suspended to bring up the third resolution of Dr. Davis, of Illinois, laid on the table yesterday.

The resolution was at length adopted under the following form:

Resolved, That all essays, voluntary communications and reports, except those of officers of the Association, reports of committees on medical education, medical literature and prize essays, shall be first presented to the Association and referred to the appropriate section, in which they shall be examined and discussed; after which they shall be returned to the secretary of the association, accompanied by an expression of opinion as to whether they are worthy of publication or not, and the secretary shall pass all such designated to be worthy directly to the Committee on Publication; and others not so designated shall be retained by the secretary or returned to their authors, as the latter may indicate.

Dr. Lewis A. Sayre, N. Y., was appointed a special Committee on Morbus Coxarius and Surgical Pathology of Articular Inflammation, read his report, which was confined to the first subject, giving an account of 72 cases, and the operations performed. Referred to the Surgical Section.

Surgical Treatment of Strictures of the Urethra—James Bryan, Penn., reported progress, and asked for longer time. Referred to its proper section.

Drainage and Sewerage of large cities, their Influence on Health—A. J. Semmes, Cornelius Boyle, G. M. Dove, D. C., reported progress, and asked for longer time.

Puerperal Tetanus: its Statistics, Pathology and Treatment—D. L. McGuigan, Iowa. Report the same as above.

Hospital Epidemics—R. K. Smith, Penn. Laid over.

Puerperal Fever—S. N. Green, Indiana. Laid over.

Anæmia and Chlorosis—H. P. Ayers, Indiana. Reported progress, and asked to continue the committee to report next year.

Veratrum Viride—J. B. McCaw, Va. Laid over.

Alcohol: its Therapeutical Effects—J. W. Dunbar, Md., asked for a change in the title, making it read, "Alcohol in its relations to man;" granted. Report next year.

Meteorology—J. G. Westmoreland, Ga. Laid over.

Milk Sickness—Robt. Thompson, Ohio; partial report made; accepted and referred to section of Practical Medicine.

Manifestations of Disease of Nervous Centres—C. B. Chapman, Wisconsin. Laid over.

Microscopic Observations on Cancer Cells—Geo. N. Norris, Alabama, chairman, asked to resign. Committee discharged.

Philosophy of Practical Medicine—James Graham, Ohio. Laid over.

On some of the Peculiarities of the North Pacific and their relations to Climate—William H. Doughty, Georgia. Absent.

On the Microscope—John C. Dalton, Jr., N. Y.; David Hutchinson, Ind.; A. R. Stout, Cal.; Calvin Ellis, Mass.; Christopher Johnson, Md. Report next year.

Diseases and Mortality of Boarding Schools—C. P. Mattingly, Ky., Dixi Crosby, N. H., reported progress. Referred to its proper section.

On Various Surgical Operations for Relief of Defective Vision—M. A. Pallen, Mo.; T. J. Cogley, Ind.; W. Hunt, Penn. Laid over.

On the Blood Corpuscle—W. Sager, Michigan. Referred to proper section, with additional time.

American Medical Necrology—C. C. Cox, Md. Report was ordered to be read before the Convention Thursday; amended to have Dr. Cox retained as chairman, and report next year.

Effects of the Virus of the Rattlesnake, when introduced in the System of Mammalia—A. S. Payne, Va. Reported progress and was discharged.

Constitutional Origin of Local Diseases, and the Local Origin of Constitutional Diseases—W. H. McKee, N. C.; C. F. Haywood, N. Y. Laid over.

Subcutaneous Injections as Remedials—I. Langer, Iowa; not allowed to report, not being an accepted delegate.

Quarantine—D. D. Clark, Pa.; E. M. Snow, R. I.; W. Jewell, Pa.; E. D. Fenner, La.; I. W. Houck, Md.; asked to be continued. Agreed to.

Medical Ethics—B. F. Schenck, Pa., chairman, resigned, and asked that Dr. Paul F. Eve, of Tennessee, be substituted; agreed to. Report next year.

Tracheotomy in Membraneous Croup—A. N. Dougherty, N. J. Partial report. This was accepted, and referred to the Surgical Section. Further time allowed to make out the report.

Effect of Perineal Operations for Urinary Calculi upon Procreation in the Male—J. S. White, Tenn. Letter from Dr. White read; laid over.

Mercurial Fumigation in Syphilis—D. W. Yandell, Kentucky. Laid over.

Cause and Increase of Crime—W. C. Snead, Ky.; asked to be continued. Agreed to.

Education of Imbecile and Idiotic Children—H. P. Ayres, Ind. Report offered; referred to its proper section.

Pons Varolii—Partial report. The committee wished to be continued; agreed to. Referred to Section on Anatomy.

The committee on Voluntary Communications reported that they had received several communications on different subjects, which were referred to their appropriate sections.

Several reports and abstracts of reports on special subjects were presented, and referred to their appropriate sections.

One o'clock, the hour of adjournment, having arrived, a motion to continue five minutes longer prevailed. A little general business was then transacted, and the Convention adjourned.

There was no general meeting of the Association on the afternoon of the 6th inst., as by a resolution passed in the morning, the different sections to which special papers were referred met to discuss the particular subjects allotted to their consideration, the members of the Association distributing themselves, and visiting that section in whose deliberations they felt most interest. These sections met in different rooms, as follows:

Section on Anatomy and Physiology, in President Woolsey's Lecture Room.

Section on Surgery, in the Geological Cabinet.

Section on General Medicine, in the Geological Cabinet.

Section on Chemistry and Materia Medica, in the Laboratory.

Section on Meteorology, Medical Topography, Epidemic Diseases, Medical Jurisprudence and Hygiene, in the Laboratory.

THIRD DAY.

The Association was called to order at 9 A. M. by the President, Dr. Eli Ives; afterwards, Dr. Jewell, of Philadelphia, presided.

The minutes of the previous day's proceedings were read by the first secretary, Dr. S. G. Hubbard, of New Haven.

A list of newly registered delegates was read, making the number over five hundred.

On motion of Dr. Arnold, of Georgia, it was resolved that no communication read before the Association should occupy more than ten minutes in its reading, and no speaker should occupy the floor longer than ten minutes.

On motion of Dr. Shattuck, of Massachusetts, the rules of order were suspended, in order to allow Dr. Bowditch, chairman of the committee appointed to take into consideration the propriety of contributing in the erection of a suitable memorial to John Hunter, in Westminster Abbey, to present his report. On motion, it was resolved that the Committee on Nominations be requested to consider the report and resolutions attached to it, and report thereupon, presenting the names of one from each State represented, who shall be empowered to take such action in the matter as may be hereafter agreed upon by the Association.

The Committee of Conference appointed to confer with the Committee of medical teachers, reported through their chairman that they had had several meetings in New York and New Haven, during which the subject of medical education had been fully discussed. He stated that in the convention of teachers the following resolutions were adopted:

"1st. *Resolved,* That the Medical Colleges represented in this Convention, are willing to adopt the rule, if it be recommended by the American Medical Association, that every candidate for degree of Doctor in Medicine must present certificates of having assiduously studied medicine during the period of three full years under the direction of a regular practitioner of medicine, recognized as such by the American Medical Association, who shall certify to the same under his own hand, and of attendance on two *full* courses of medical lectures in a medical school, recognized as regularly organized by the American Medical Association, with an interval of at least three months between the termination of the first course and the commencement of the last.

"2d. *Resolved,* That the medical colleges represented in this Convention are willing to keep a register of their students, in which shall be entered the name, the age, the period of commencing medical studies, and diploma already received, with the name of the college conferring it, and the name of the preceptor.

"3d. *Resolved,* That the medical colleges represented in this Convention, allowing that the proposed plan of admitting delegates from State Societies to attend the examination of the candidates for the degree of Doctor in Medicine to have been successfully carried out in several places, do not think that it can with advantage be universally adopted; but at the same time they are ready to ascertain and discuss any other measure by which the admission of unsuitable and unworthy members within the ranks of the profession can be prevented.

"4th. *Resolved,* That this Convention earnestly recommend the American Medical Association to adopt such measures as will secure the efficient practical enforcement of the standard of preliminary education adopted at its first organization in May, 1847, or of a standard put forth by the medical society of the State in which a college is located, and that medical colleges will thankfully receive and record the certificates alluded to in said standard, and one of moral character, whenever the profession generally and the preceptors will see that students are properly supplied with them.

"5th. *Resolved,* That hospital clinical instruction constitutes a necessary part of medical education, and that every candidate for the degree of Doctor in Medicine, shall be required to have attended such instruction regularly for a period of not less than four months.

"6th. *Resolved,* That the members of this Convention are ready to coöperate in any efforts by which the attention of the community and of legislatures shall be called to the importance of the endowment of medical colleges and professorships.

"7th. *Resolved,* That the attention of the American Medical Association be called to the proofs, in a letter from a German medical professor, of the degree of Doctor in Medicine being conferred in Germany on unsuitable persons, to be used in this country."

[At the meeting of the Convention of Medical Teachers, during the discussion on the above resolutions, Prof. Logan, of Georgia, offered the following as a substitute:

WHEREAS, It is apparent that the medical colleges of the United States are not disposed to adopt the measures indicated by the American Medical Association, for the establishment of a higher system of medical education, as manifested by the failure upon the part of a large portion (and among the number some of the most prominent) to be represented at the Convention of Colleges, held last year in Louisville, and by a renewal of the same course of action towards the adjourned meeting of said Convention, and as no action on the part of the colleges represented would be likely to effect any change in the present system of medical education, and any attempt on the part of this limited representation to initiate any reform might be regarded as an offensive assumption of power; therefore,

Resolved, That this body declines to act for the medical colleges of the United States.

Resolved, That in the medical colleges alone resides the power of effecting any desirable change in the present system of medical education, and it is only from their united action that any good result can be expected.

Resolved, That a committee of —— be appointed to report the action of this body to the American Medical Association.

The substitute was discussed by Profs. Logan, Shattuck, Crosby, McGugin, McDowell, Storer, and Palmer, and was finally rejected.]

The chairman then read the following communicatiun, addressed to the Convention of Teachers, by Prof. Henry N. Frost, of the Medical College of South Carolina, in regard to medical education in the South:

"I should wish to be heard while I make a few remarks on the progress of education at the South, and the advances we have made in fulfilling the requirements of the Association. The report in my hand of the Dean of the Medical College of the State of South Carolina, of the graduates of that college and their requirements, presents a total of one hundred and fourteen graduates, all of whom had a preparatory education, such as the Association requires. Nearly all, with the exception of six, have had good literary opportunities: some graduates of colleges—others of academies of high repute—others instructed in the classics. Even those whose studies were confined to English, have had their minds strengthened by the study of mathematics.

"In making this statement, I would not be understood to say,

that they were well versed in the classics; but they have enjoyed the opportunity, and profited in a greater or less degree by it. Neither would I be understood to say that our graduates are all doctors. The diploma conferred is only an evidence that they have undergone a course of study; that they have been instructed in the principles of the profession, and made acquainted with the means by which they are to arrange and systematize the various occurrences presented to them; in short, that the foundation has only been laid by which they are to pursue advantageously their researches, and act for themselves. To be able doctors and successful practitioners requires years of study and observation, and there are many who, after all this application, have never been made doctors.

"The community in which a young graduate resides, soon becomes aware of this fact; it is only after a long apprenticeship, and years of toil and devotion to his business, that he acquires practice and confidence. Confidence is proverbially a plant of slow growth, and it is only after the individual has proved himself worthy that it is freely bestowed. Still, however, every doctor has been a student, and as such has to endure taunts and imputations as to his qualifications. I well remember when a student in medicine, forty-seven years since, fashionable ladies commented upon the homely appearance and neglected dress of the students of Philadelphia, and tauntingly remarked that there was little to be observed in the streets but dogs and Virginia doctors! Yet from these classes, of whom these remarks were made, there came forth a Wood, Mitchell, Meigs, McClelland, Hodge, Bartons, Derach, and, not to forget my own section, Dickson, Holbrook, Ramsay, and many others. Yet these young men were as ungainly as many at the present day; but they contained the gem, as many at the present day, which required only to be polished. Education has been progressive to my observation; our graduates show their desire to excel by seeking opportunities abroad for greater acquirements. In my day, our reading was desultory and without system. My preceptor pointed to his library, and told me to select my reading. My anatomical studies were pursued with a scalpel and the Dublin dissector. Our clinical instruction was nothing virtually. Mark the difference at the present time: your winter and summer courses; your crowded hospitals; your private instructions, and

your model plates, &c. All these speak trumpet-tongued, that the work of improvement is onward."

In conclusion, the committee offered the following resolutions for adoption by the Association:

Resolved, That it is the duty of medical colleges to require of every candidate for the degree of Doctor of Medicine, certificates of study during the full period of three years, under the direction of a regular practitioner of medicine, recognized by the American Medical Association, who shall certify, under his own hand, as to an attendance on two full courses of lectures, with an interval of at least three months between the termination of the first and the commencement of the second course.

Resolved, That every medical college shall keep a volume, in which every medical student presenting himself, shall enter his name, his age, the period of his commencing the study of medicine, any diploma he may have received in evidence of previous education, with the name of the college or school from which he received such diploma; and the name of the preceptor with whom he has been studying.

Resolved, That hospital clinical instruction constitutes a necessary part of medical education, and every candidate should be required to have attended such instruction regularly for a period of not less than four months.

Resolved, That the professors of every medical college should recommend to their trustees, or board of managers, the adoption of a rule authorizing them to allow the attendance of two or three delegates, from the State Medical Society, at all examinations of candidates for the degree of the doctorate, and accord to these delegates a vote on the question of recommending such candidates for a degree.

Resolved, That every State Society be recommended to choose proper delegates at its annual meeting, to attend the examination of candidates for the degree of M. D., at all the medical colleges within their respective States.

Resolved, That this Association will not recognize as a regular organization, any college which does not require evidence of suitable preliminary education from all applicants for collegiate medical instruction.

Resolved, That we commend the use of all proper efforts, by which the attention of persons of means and liberal disposition, as

well as legislative bodies, shall be directed to the propriety of endowing such medical colleges, and professorships thereof, as shall be recognized by the Association.

Resolved, That this Association recognize as a regularly organized medical college, one which has been represented at any meeting of this Association, and which complies with the preceding rules and directions.

Resolved, That this Association recognize as regular practitioners of medicine, all who have been members of this Association, and have not forfeited their rights and privileges, and all members of State and County Societies, in full standing.

The report was received, and taken up by sections. When the first resolution came up, a motion was made to amend, by striking out that part requiring an interval of three months to elapse between the termination of the first course and the commencement of the second; the objection being that the resolution, adopted as offered, would do an injustice to summer schools, whose sessions would have to begin three months after the closure of the winter sessions, in order to graduate students, thus throwing the session into July, August and September, and crowding upon the next winter session; and that such a course would drive students altogether from the summer schools.

Dr. McDowell, of Missouri, spoke in strong terms against the amendment. He despised the plan of some professors, who teaching at a winter school in the South, immediately the winter session closes, bring their half fledged brood to a Northern summer school, and there delivering a *second* course of lectures, foist their hastily hatched students upon the medical profession. He was entirely opposed to the practice of pushing and forcing, which was becoming so rampant.

The discussion was further participated in by Drs. Shattuck, of Boston, Austin Flint, N. Y., Brodie, of Mich., Palmer, of Mich., Morse, of Me., Atlee, of Pa., and others.

Dr. Jno. L. Atlee, of Philadelphia, would rather increase the interval to six months. Nor did he want, as others had suggested, to leave the matter to the discretion of the professors in the different schools. His experience proved that a man never becomes a thorough and proper student of medicine until *after he has attended his first course of lectures,* for he then learns what is required, and how he should direct his studies so as to profit by them; and as

he studies in the interval between the collegiate courses, the demonstrations of the previous winter reappear to him as he reads his text books, giving an interest to the study he could have sought for in vain before he had attended a course of lectures. He would rather have the course of instruction lengthened to eight or nine months, and have a less number of daily lectures. We wanted no student to have credit for attendance on more than one full course in one year, no matter how many regular courses he may have attended, and he moved to amend the amendment by striking out "an interval of three months," &c., and inserting, "and no student shall be credited for having attended more than one full course of lectures in any one year."

Dr. Palmer, of Michigan, said that many of the students he had met with voluntarily placed an interval of more than one year between their two courses of lectures. That they only became students in truth after attending one course of lectures, and they would be seen at college one winter and be missed the next, reappearing the third winter, when they would come forward and bear off the honors of the school.

Dr. Morse, of Maine, thought the appetite for legislation was too great. He wanted no restrictions to the aspirant for medical honors. He objected to the amendment as unjust to poor students, who would be forced to lose one year waiting for a degree that might have been employed in some pecuniarily profitable manner, if they were allowed, as they often do, to study two years before attending lectures, often while working at the same time for support, and then having saved the sum necessary to pay for their tickets attending two courses of instruction, one following directly upon the other, thus complying with the requisites of three years study and attendance on two full courses of lectures, even though they attend two full courses in one year.

A motion of Dr. Bennett, of Dansbury, Conn., to lay the whole matter on the table, was lost.

Dr. Johnson, of Mo., did not want the courses to follow too closely on each other. Apart from other considerations, such a course would crowd the student too much, and over-tax his powers of physical and mental endurance. Students required time for relaxation, whether they wanted it or not, and therefore he was in favor of a considerable interval between the courses, and only one course in a year.

Dr. Worthington Hooker, of New Haven, Conn., thought there was not too much actual instruction being crowded together that was to be avoided, but rather too much lecturing, which brings different subjects in too close connection before the minds of the students, and taxes their energies too much, and therefore he did not want the courses crowded on each other; nor did he want the lectures to be as crowded as they usually are. He stated that in the medical department of Yale College it was customary to make a distinction in the ability for receiving instruction, between medical students who had received the advantages of a previous classical education, and those who had not enjoyed this privilege; and that they considered classical students full one year in advance of the others, and that they made this distinction in their favor regarding the length of time required to be devoted to the special study of medicine. They only required two years application from classical students, while they exacted three years' study from all others. He firmly believed that a difference of one year should be made, but he would prefer the course of application to be extended one year longer in each case, thus making it three and four years' study instead of two and three, as it now is.

Dr. Atlee was here allowed to alter his amendment so it should read, "and no student shall attend a second course of lectures until a year shall have elapsed since the commencement of the first course."

Dr. Davies, of Illinois, thought that the design of the resolution had been generally misunderstood by the members of the Association. He considered that the great fault in medical education, which they were trying to discover and rectify, consisted in the laxity exhibited in exacting from each student of medicine s suitable amount of preliminary education. He wanted a previous education, and he knew that if energetic young men love the profession of medicine and desire to become enrolled among its votaries, they would take care to obtain the necessary education if they did not possess it; and those who did not think the profession worthy of this trouble, were much better out of it; and if the preliminary education was exacted, we should have an intelligent and educated body of physicians, and not be obliged to accept among us those of whose general literary attainments we are ashamed.

He also disliked the plan of delivering the same course of lectures to students of the first and second course. Those who had

studied medicine but six months could by no manner of means comprehend what was intended for students of three years standing; and it was folly to demand it of them. He wished the colleges to be so re-organized, that there should be a gradation of instruction according to the advance made by the several classes of students.

Dr. Reese, of N. Y., remarked, that as the winter schools closed in March, and the summer schools could not, by the resolution, begin in June, this would force students to employ in study the months of July and August which is the general period of relaxation from labor—and thus virtually, in a great measure, prevent graduation at the summer schools.

After some more discussion, the amendment of Dr. Atlee was adopted, when a motion was made by the opponents of the amendment, to lay the *resolution* on the table. This motion was lost, and finally, the *resolution, as amended, was adopted.*

Second resolution, adopted.

Third resolution, adopted.

The fourth resolution was amended by Dr. McCaw, requiring "that in those States where there are regular State Medical Societies, the delegates elected to be present at the examination of candidates for the degree of M. D., in all the medical schools of the State, should be selected from the members of the State society; in those States where there are no societies, the selection is to be made from members of the profession in good standing."

Dr. Jno. L. Atlee wanted no representation of examiners from any except State Medical Societies, which would force those States where they did not exist, to organize State Medical Societies, and therefore he opposed the amendment, though he favored the original resolution.

Dr. Storer, of Mass., wished no restrictions to be placed on medical schools.

Dr. Mussey, of La., wanted to have a resolution passed, providing for the examination of teachers before they were elected to professorships, and to pass no men but those who were known to be favorable to the ideas of the Association, regarding medical instruction.

Here a tumultuous clamor arose, during which the amendment was withdrawn, and the previous question called for and sustained; when the resolution was, upon call, again read, and finally adopted as originally reported.

The fifth resolution gave rise to a good deal of discussion as to the propriety and the right of placing medical schools under the censorship of the State Medical Societies.

Dr. Timothy Childs, of Berkshire, Mass., stated, that forty years ago he called for a board of examiners to be present at all examinations for a degree, and that he had never ceased to urge the propriety of so doing. He had never passed a student without such supervision.

He stated that he was the first man to introduce into medical colleges a Professorship on Pathology, and he was always in favor of enhancing the dignity and worth of his profession, and as long as he was able to raise his voice, he would oppose to the utmost all those who attempt to lower the standard of medical excellence, regardless of the motives that prompt them to do so.

Dr. Worthington Hooker, of New Haven, Ct., explained that Yale College, further back than forty years ago, had, of its own accord, adopted the plan contained in the resolution under consideration, and during his connection with the college, there had not been one whisper of disapprobation regarding it. There was harmony between the State Medical Society and the institution, which feels the genial effects of that harmony, which gives it its strength and position.

He thought that all medical colleges should be closely watched by the State Medical Societies of their respective States.

The resolution was adopted.

Sixth resolution adopted.

Seventh resolution adopted.

Eighth resolution adopted.

The ninth resolution was, after some little discussion, on motion, laid upon the table.

The whole report was then adopted and referred to the Committee on Publication, for publication in the forthcoming volume of Transactions.

The Committee on Nominations then reported the following appointments on standing and special committees, which was received and adopted, and the nominations accepted.

Committee on Medical Literature.—Frank H. Hamilton, N. Y., Edward Warren, Md., Chas. A. Lee, N. Y., J. W. C. Ely, R. I., E. H. Clark, Mass.

Committee on Medical Education.—Levin T. Joynes, Va., Christopher C. Cox, Md., J. C. Bradbury, Me., L. H. Steiner, Md., M. A. Patten, Mo.

On the Surgical Treatment of Strictures of the Urethra—Jas. Bryan, Pa.

On Drainage and Sewerage of Large Cities—their influence on public health—A. J. Semmes, La., C. Boyle and C. M. Dove, D. C.

On Puerperal Tetanus—its statistics, pathology and treatment—D. L. McGugin, Iowa.

On Acnemia and Chlorosis—A. P. Ayres, Ind.

On Alchohol and its Relations to Man—J. W. Dunbar, Md.

On Milk Sickness—Robert Thompson, Oramel Martin, Ohio, S. W. Bemis, Ky.

On Microscopic Observations on Cancer Cells—Geo. W. Norris, Pa.

On Blood Corpuscles—A. Sager, Mich.

On the Hygienic Relations of Air—C. C. Cox, Md., Chas. W. Parsons, R. I.

On Quarrantine—D. D. Clark, Pa., M. Snow, R. I., Wilson Jewell, Pa., E. D. Fenner, La., J. W. Houck, Md.

On Medical Ethics—Paul F. Eve, Tenn., J. A. Murphy, Ohio, M. L. Linton, Mo., R. S. Powell, Ga., B. F. Schenck, Pa.

On Tracheotomy in Membranous Croup—A. N. Dougherty, N. J., Geo. H. Gay, Mass., J. M. Minor, N. Y.

On the Effect of Perineal Operations for Urinary Calculi upon Procreation in the Male—J. S. White, Tenn., J. B. McCaw, Va., R. C. Foster, Tenn.

On Mercurial Fumigations in Syphilis—D. W. Yandell, Ky.

On the Cause and Increase of Crime, and its mode of Punishment—W. C. Sneed, Ky.

On the Microscope—R. C. Stiles, Vt.

On Gangrene of the Lungs—C. L. Allen, Vt.

On the relation which Electricity sustains to the Courses of Disease—Isaac Casselbury, Ind.

On the Morbid and Therapeutic Effect of Mental and Moral Influences—Alfred Hitchcock, Mass.

On the Causes of the Extinction of Aboriginal Races, more especially of the Red Men of America—Geo. Suckley, N. Y.

To report on the practical workings of the United States law relating to the inspection of drugs and medicines—E. R. Squibb,

New York, and F. Bowditch, Mass., Prof. Jos. Carson, Philadelphia.

On the Causes and Treatment of Un-united Fractures—E. K. Sanbone, and]

On Diptheria—Alonzo Clark, New York.

On the effect of stimulants in the treatment of fractures—John W. Russell, Ohio.

On dislocation of the hip and shoulder joints—Moses Gunn, Michigan.

To investigate the conditions demanded for a diploma of Doctor of Medicine in the various Medical Schools and Universities of Europe—J. Baxter Upham, Mass., Robert Thompson, Ohio, Geo. C. Shattuck, Mass.

In regard to the committee on the memorial to John Hunter, the following resolutions were adopted:

Resolved, That it be recommended to the different States to collect subscriptions of not more than one dollar each, from every regularly educated physician. All money so collected to be forwarded by the chairman of the committee hereby appointed, to the Treasurer of the Hunter Medical Fund in London.

Resolved, That Drs. Henry J. Bowditch, Mass.; Amos Nourse, Maine; George B. Twitchell, N. H.; Chas. Clark, Vt.; G. L. Collins, R. I.; Charles Hooker Conn.; Henry D. Bulkley, N. Y.; Wm. Elmer, N. J.; John L. Atlee, Pa.; James Cowper, Del.; C. C. Cox, Md.; J. B. McCaw, Va.; Cornelius Boyle, D. C.; James H. Dickson, N. C.; H. K. Frost, S. C.; R. D. Arnold, Ga.; John Nott, Ala.; G. A. Nott, La.; W. G. Williams, Mass.; C. A. Page, Mo.; J. B. Landsley, Tenn.; R. J. Breckenridge, Ky.; J. W. Russell, Ohio; A. B. Palmer, Michigan; Calvin West, Ind.; Patrick Gregg, Ill.; D. L. McGugin, Iowa; J. B. Douseman, Wis.; D. W. Hand, Minn. O. Harvey, Cal.; F. G. McSparack, Ark., be a committee to collect subscriptions.

A resolution was adopted to send a copy of the resolutions passed, to each Medical School in the country.

A resolution was adopted, directing that a seal of the Association be given to every Medical School in good standing, reserving the privilege of demanding the same upon sufficient evidence that the school had no longer claims to its possession.

It was moved, that in order to expedite business without a session next day, the sections meet at 2½ P. M., and at 4 P. M. the

Association again convene to close business and receive their reports.

CLOSING SESSION.

The Association was called to order at 4 P. M., Dr. Wilson Jewell, in the chair.

Various special committees were called upon to report, and failing to do so were discharged—other reports which had been placed on the Secretary's table were, without reading, on motion, referred to the committee on publication, with power to act.

The various sections were called upon for their reports, and the various papers respectively discussed by them were referred to the Committee on Publication.

The report of the Committee on Rules of Order, lying on the table, was then called for and read, and the order of business acted upon, and the articles severally adopted, and afterwards the whole report was laid on the table.

A communication was read from the Essex County Medical Society, of the State of New Jersey, containing the following preamble and resolution, for action upon by the Association:

Whereas, The indiscriminate sale of poisonous drugs, at retail, is fraught with danger to the community; be it

Resolved, That, in the opinion of this Association, it is the duty of the public authorities in the different States of the Union to pass prohibitory laws against the retailing of morphia, strychnia, prussic acid, etc., except on the written prescription of a regular practitioner of medicine, or on the personal application of a well-known citizen; and that a committee be appointed in the different States to carry into effect the spirit of the resolution.

The paper was received, and the resolution adopted.

The report was referred to the Committee on Publication, with power to act.

On motion of Dr. Davis, of Ill., it was decided that the committee called for be appointed at his leisure by the President of the Association.

On motion, Dr. Cox, of Md., was requested to present at the next meeting of the Association a paper on Necrology.

Dr. A. N. Dougherty, from the Committee on Tracheotomy, reported that from the mass of facts they had gathered with regard to the result of this operation, the proportion of successful operations

was 1 in $3\frac{4}{10}$. The statistics of cases in this country, as far as ascertained, was 17 cures out of 58 cases.

Trousseau before 1844 had 212 cases, of which there were 40 cures and 132 deaths; after 1848, he had in 49 cases 48 deaths. From 1849 to 1858, he had at the Children's Hospital, at Paris, 466 cases, which resulted in 126 cures and 340 deaths. Another operator met with but 4 cures in 36 cases. Statistics of other operators were presented, and at the request of Dr. Dougherty, the report was referred back to the committee, with power to complete the report, and present the same at the next meeting of the Association.

Dr. Bell, of Brooklyn, offered the following resolution:

Whereas, Some of the papers submitted to this Association require a longer period of time for their examination than the annual meetings admit of; therefore, be it

Resolved, That the several sections have power to refer such papers to experts, who shall determine whether they are worthy of being referred to the Committee on Publication, for publication in the transactions.

On motion, this was laid over to the next meeting of the Association.

A motion of Dr. Chapin, that all papers which had not been disposed of by the sections, should be referred by the Committee on Publication to experts, who should report back to them whether the papers were worthy of publication in the transactions, was laid on the table.

Various rules of order and amendments to the constitution, which had laid over from previous meetings, were again indefinitely postponed.

A communication from the Clinton County Medical Society of Iowa, to which was appended a catalogue of the college, was read. This communication charged the Western Reserve College with having exceeded its rights and privileges, in conferring the degree of the doctorate upon one Freeman Thompson, who had not come up to the requirements of their curriculum, who had not been examined by the professors in the presence of censors, and who had not been in attendance on lectures, since the session of 1848–9 a single day. It stated that at one time the Western Reserve College acknowledged the truth of the above charge, and at another time denied it.

They called the attention of the Association to this case, and desired that the Western Reserve College be refused representation in the Association. Various papers were appended to the communication, substantiating the truth of the facts mentioned.

A motion was made to refer the whole subject to a select committee of three, to be appointed hereafter by the chairman, who should report on the same at the next annual meeting of the Association.

Dr. Davis, of Illinois, reminding the mover of the existence of a permanent Committee on Medical Ethics, created for just such purposes, the motion was altered to refer the matter to the Committee an Medical Ethics, with instructions to report at the next annual meeting, and carried.

A communication was read from the Legislature of Connecticut, stating that the Judiciary Committee had under consideration their memorial on Criminal Abortion, and asking, in order to further the matter, that a committee be appointed by the Association to frame a bill meeting the exigencies of the case, to be presented for due consideration of the Legislature.

It was moved and carried that the chair appoint a proper committee to draw up such a bill as would meet the views of the Association, and present the same to the Legislature of the State.

A motion was made to alter the time of meeting from June to May, so that if the Association desire to meet in 1862, in New Orleans, they could do so before the time when yellow fever occurs. This being an amendment to the constitution, was laid over for one year.

On motion of Dr. S. W. Butler, of Philadelphia, it was resolved that this Association request the Convention of Medical Teachers to be perpetuated in connection with the American Medical Association, and meet in conference the day previous to the annual meetings of the Association, and report to the same.

On motion, the same committee appointed last year was continued, any vacancies occurring to be filled by the President.

On motion of Dr. J. L. Atlee, of Philadelphia, the chairman of the Committee on the Memorial to John Hunter was empowered to fill any vacancy which may occur in that committee.

A motion by Dr. Mason, of New York, that a committee of five be appointed to prepare rules of order for the Association, and to report them at the next annual meeting, was laid on the table.

A communication from Elmyra, N. Y., was read, advising the offer of a prize for the best essay on the application of mechanical contrivances in the practice of surgery, having reference to the cure or alleviation of hernia, stricture of the urethra, stone in the bladder, fractures, dislocations, &c., was referred to the surgical section of next year.

A vote of thanks was passed to the retiring officers, for the efficient manner in which they had performed their duties.

A resolution was passed to the effect that the thanks of the Association are due to the Faculty of Yale College, the medical profession, and the citizens of New Haven, for the elegant hospitality tendered to the Association; and to the proprietors of the different manufactories, for the generous manner in which they welcomed the delegation to inspect whatever of interest their factories embraced; and to the railroad and steamboat companies, who have reduced their fare on the respective routes, in favor of the delegates to this Association.

Various amendments to the constitution, laid over from last year, were called up and indefinitely postponed.

Dr. Lewis A. Sayre, of New York, offered a resolution that the Smithsonian Institute be asked to collect all the medical literature that has appeared in this country, and is scattered in various journals and periodicals, and collect it in a general library for the purposes of the profession.

On motion of Dr. Davis, of Ill., the Association went into a committee of the whole, to consider the report of the Committee on Medical Education, Dr. Askew, of Delaware, in the chair. An animated discussion ensued as to the extent of preparatory qualification which ought to be exacted from young men designing to commence the study of medicine, but no conclusion being arrived at the committee rose and reported that they had considered the above report, but had no suggestions to make to the Association, and recommended the resolutions to the Committee on Publication.

Dr. Hamilton, of Brooklyn, N. Y., moved the adoption of a resolution to devise a plan for the organization of a College, or Board of Examiners, to be called the College of Physicians and Surgeons of the American Medical Association, in order to arrest all legislation which has reference to medical schools, and to determine what shall be the prerequisites to a degree of doctor of medicine. Said

College to consist of one member from each State, and to meet annually, immediately before the annual meetings of the Association.

Dr. S. W. Butler, of Philadelphia, stated that the whole plan in detail, only under a different name, had been brought before the Association at a previous meeting.

Dr. Cox, of Maryland, was exceedingly surprised at the idea of such a suggestion, and spoke against it in bitter terms, though at the same time he urged the necessity of a proper preliminary education for medical students.

Dr. Thompson, of Ohio, said that the asserted prerequisites for a degree in reference to preliminary education, established twenty years ago, were always disregarded in his State.

After some general discussion on this subject, the Association, on motion, adjourned *sine die*.

Meeting of the Ohio State Medical Society.

Ohio White Sulphur Springs,
June 12th, 1860.

Society met in the Hall, in the Grove of the Ohio White Sulphur Springs, and was called to order by the President of the Society—Dr. L. Firestone.

Dr. McMillen, from the Executive Committee, offered the following report:

The executive Committee of the Ohio State Medical Society, recommend the adoption of the following order of business:

The hours of meeting shall be 9 o'clock A. M. and 2 o'clock P. M.

1st. Report of the Committee on Admissions. 2d. The election of new members. 3d. Annual election of officers. 4th. Valedictory of President. 5th. Reports of standing committees. 6th. Reports of special committees. 7th. Miscellaneous business. 8th. Volunteer reports.

Dr. Baker moved that the report be adopted. Carried.

Dr. Pomerene being the only member of the committee on Admissions present, the chair appointed, to fill the vacancies, the following gentlemen: Drs. Thomas, Hurxthall, Miller and Conklin.

Dr. Baker moved that a committee be appointed to nominate permanent officers.

Dr. Murphy moved (in amendment) that the candidates be nominated in open society, and elected by ballot.

Dr. Kincaid moved (in amendment) that the committee be instructed to report the names of candidates.

Dr. Baker moved to lay the subject on the table; which was lost.

Dr. Kincaid withdrew his amendment, and, with leave of Dr. Murphy, moved that the rule adopted last year be adopted as the rule of this year; which was carried, and is as follows:

Candidates for the several offices shall be nominated in open society, and balloted for; and should no one on the first ballot receive the constitutional majority (when there are three or more candidates), the one who has received the smallest number of votes shall be dropped on each succeeding ballot, until a choice is made.

Dr. Pomerene, from the Committee on Admissions, reported the following gentlemen for membership, who were duly elected.:

Drs. David Noble, Sugar Tree Grove; Samuel Hart, Marietta; S. L. Wright, Bellefontaine; L. W. Moe, Gilboa; J. L. Mount, Morrow; John W. Thompson, Columbus; N. Dalton, Logan; B. Raymond, Carroll; J. M. Southard, Marysville; J. L. Brenton, North Georgetown; Wm. A. McCulley, Lewis Centre.

The Society proceeded to the election of officers for the ensuing year, with the following result:

President—H. S. Conklin, M. D.

Vice-Presidents—R. R. McMeens, of Sandusky; S. Bonner, of Cincinnati; W. P. Kincaid, of Neville; S. P. Hunt, M. D., of Morrow.

Secretaries—W. W. Dawson, M. D., of Cincinnati, and R. Gundry, M. D., of Dayton.

Treasurer—John B. Thompson, M. D., of Columbus.

Librarian—Robert Thompson, M. D., of Columbus.

Committee on Admissions—Drs. Mullen, New Richmond; Hurxthal, Massillon; Pomerene, ———; Weber, Cleveland; Miller, Wooster.

The chair appointed Drs. Hamilton and Kincaid to conduct the President elect to the chair.

Dr. Conklin, on assuming the duties of President, thanked the members for the honor conferred, and trusted that they would give

him their assistance and support in the arduous duties of the post.

On motion of Dr. Kincaid, the valedictory address of the retiring President was made the order of the day for Wednesday, at nine o'clock A. M.

Dr. Loving, Chairman of the Committee on Publication, made a report as to the publishing of the Transactions of last year; which was accepted.

Dr. Thompson, as Treasurer for the past year, made his annual report on the finances of the Society.

The report was, on motion of Dr. McLean, referred to the Finance Committee.

On motion of Dr. Kincaid it was

Resolved, That the thanks of this Society are hereby tendered to the retiring officers, for the able and dignified manner in which they have discharged their several duties.

The President appointed the following Finance Committee:

Dr. E. B. Stevens, A. Metz, Menton, McLean, and Rogers, of New Richmond.

The Society took a recess until 2 o'clock P. M.

TWO O'CLOCK P. M.

Society resumed its session after recess. Dr. Conklin, President, and Drs. McMeens, Bonner, Kincaid and Hunt, Vice-Presidents, took their places on the platform.

Dr. A. H. Baker, Chairman of Committee on Surgery, delivered a synopsis of his report on Surgery.

Drs. Weber, Murphy and McLean participated in the discussion which ensued.

On motion of Dr. R. J. McLean, the report was laid on the table.

Dr. Pomerene, from the Committee on Admissions, reported in favor of the admission of Dr. C. Rathburn, of Marysville, to membership; which was adopted.

Dr. M. B. Wright, Chairman of Committee on Obstetrics, made an interesting report on topics embraced in that department of medicine.

An interesting discussion took place by Drs. Kincaid, Hamilton and Murphy.

On motion of Dr. Kincaid, the report was referred to the Committee on Publication, with instructions to print.

On motion of Dr. Landon, the Society adjourned until the next morning.

Wednesday, June 13, 1860.

Society met pursuant to adjournment, Dr. H. S. Conklin, President, in the chair.

Committee on Admissions, Dr. Mullen, reported the following gentlemen as qualified to become members:

T. B. Williams, Delaware; Isaac Miranda, New Carlisle; J. L. Abbott, Sidney; G. W. Weeks, Bloomville; S. R. Blizzard, Bellefontaine; —— Stephenson, Leesburg.

On motion of Dr. Bœrstler, the report of committee was adopted, and the gentlemen elected as members.

A copy of the Transactions of the Illinois State Medical Society was presented to this meeting, through T. K. Edmiston, M. D., of Clinton, De Witt county, Illinois; also, a certificate accrediting said Dr. T. K. Edmiston as a delegate to represent the Illinois State Medical Society in this meeting of the Ohio State Medical Society.

Dr. Brown, of Bellefontaine, offered the following resolution, which was adopted:

Resolved, That the acceptation of the Transactions and certificate aforesaid, be acknowledged and entered upon the minutes of this meeting, and that our Treasurer be directed to transmit a copy of the transactions of this meeting to the Secretary of the Illinois State Medical Society, and one to Dr. T. K. Edmiston, as their representative.

The Society proceeded to the order of the day, when

Dr. Firestone delivered a very able and interesting valedictory address.

On motion of Dr. Thompson, the address was referred to committee on Publication, with instructions to print the same in the transactions.

Dr. E. B. Stevens introduced to the Society, as visiting physicians from Indiana, Dr. Kitchen, of Indianapolis, and Dr. Horton, of Richmond, who were accorded the privileges of the floor, and invited to take part in the deliberations of the Society.

Dr. C. P. Landon, chairman of committee on Obituaries, presented his report, which gave an interesting account of the professional services of Dr. H. A. Ackley, of Cleveland, who died during the past year.

On motion of Dr. Allen, said report was referred to Publication committee, with instructions to print.

Dr. McMeens, chairman of committee on *Cannabis Indica*, reported at length on the history and therapeutic value of that agent.

On motion of Dr. W. W. Dawson, the report was referred to the Publication committee, with instructions to print.

Remarks were made on the report by Drs. Gundry, McMeens, Horton, Murphy, Allen, Kincaid, Firestone, Gaston, and Hill.

Dr. E. B. Stevens, chairman of Finance committee, presented the report of that committee:

Ohio State Medical Society,
June 12, 1860.

The Finance committee report that they have examined the books and accounts of the Treasurer, and find them correct. They therefore recommend the reception and adoption of his report.

They also recommend that the assessment for 1860 be one dollar.

Respectfully submitted,

E. B. Stevens,
S. G. Rogers,
R. G. McLean,
A. Metz,
Finance Com.

Which report was accepted and adopted.

On motion of Dr. Gundry, the Society took a recess until 2 o'clock.

TWO O'CLOCK, P. M.

The Society resumed its session.

Dr. Pomerene, from the committee on Admissions, reported in favor of the application of Dr. S. Bailey, of Flushing, Belmont county, who was thereupon duly elected a member.

Dr. E. B. Stevens, chairman of committee on Medical Literature, read a report upon that subject, which, on motion of Dr. Kincaid, was referred to committee on Publication, with instructions to print.

Dr. A. Metz made his report upon Diseases of the Eye, which received the same reference.

Dr. Crane, one of the delegates from this Society to the National Medical Association, gave an interesting account of the late meeting of that body at New Haven, Conn.

Dr. Armor, chairman of the committee on Prize Essays, made a verbal explanation of the reasons that no report was forthcoming on that subject.

Dr. Pomerene, from committee on Typhoid Fever, read his report on that disease, which was referred to committee on Publication, with instructions to print.

Dr. T. L. Wright, of Bellefontaine, read a volunteer paper upon "The influence of chloroform upon the intellectual processes, or an inquiry concerning the credibility of testimony relating to transactions, occurring to a mind partly unconscious," which, on motion of Dr. Bœrstler, was referred to committee on Publication, with instructions to print.

On motion of Dr. Kincaid, the Society adjourned.

Thursday, June 14, 1860.

Society met pursuant to adjournment.

Dr. Mullen reported in favor of the admission of Dr. G. C. Blackman, of Cincinnati, who was duly elected to membership.

Dr. Stevens introduced to the Society Dr. Parvin, delegate from the Indiana State Medical Society, who was welcomed by the chair (Dr. Kincaid), and invited to participate in the future proceedings. Dr. Parvin replied in a short and appropriate speech.

Dr. Landon offered the following resolution, which was unanimously adopted:

Resolved, That when this Society adjourn, it adjourn until the second Tuesday of June, 1861, to meet at the Ohio White Sulphur Springs.

Dr. Mullen, from committee on Medical Societies, reported that the Union Medical and Surgical Society of Alliance desired to become an auxiliary of this Society, and had forwarded a copy of their constitution and by-laws. The committee therefore recommended that said Society should become an auxiliary to this Society.

Dr. Mullen moved the adoption of the report.

Dr. Murphy moved the following amendment:

Resolved, That the Union Medical and Surgical Society be requested to strike out the clause in the by-laws admitting female physicians to membership in their Society.

Dr. Carey moved to lay the report on the table, which was negatived.

Dr. Hill moved to indefinitely postpone, which motion was lost on division.

Dr. McDermott moved to refer the application of the said Society, with pending resolution, to special committee, with instructions to report to-day.

Dr. Thompson moved the following amendment:

To recommit the report to committee on Medical Societies; which was carried.

Dr. Sinnet stated that a discrepancy existed in his account with the Treasurer, he not having received credit for certain assessments not due.

On motion of Dr. Murphy, the account of Dr. Sinnet was referred to the Finance committee and the Treasurer.

The Treasurer read a long list of members in arrears for assessment of more than four dollars each, amounting in the aggregate to more than nine hundred dollars.

On motion of Dr. McDermott, it was

Resolved, That all claims due the Society after the first of October, 1860, shall be placed in the hands of a lawyer, for collection.

Dr. Baker offered the following:

WHEREAS, It is believed by many members of this Society, that sometimes membership is sought for no other purpose than to give more prominence to the applicant, and that thereafter he neglects all duties in connection with the Society, showing clearly and conclusively that the God of Mammon has more influence over his actions than the love of the profession or those confided to his care, and

WHEREAS, Such individuals are a dead weight upon the Society, therefore,

Resolved, That any member absenting himself from the deliberations of this Society for three consecutive years without paying his annual dues and not offering a valid excuse be *expelled* from the Society.

Resolved, That *five* years absence from the meetings of this So-

ciety, notwithstanding he may have paid his dues, shall be considered sufficient cause for expulsion, unless otherwise provided for.

Resolved, That when a member of this Society shall have lived out the time allotted to man, *three score and ten years,* he shall be exempt from the payment of dues, and thereafter be considered an honorary member with all the privileges of a member and to be entitled to a copy of the proceedings of the Society so long as he may live; provided always, he may not object to the conferring of the honor intended.

A division of the subject having been had, the preamble and first resolution were adopted; the second and third resolutions were rejected.

Dr. Caruthers moved that Dr. Gundry be requested to forward to the Publication Committee the report on Insanity, read by him before this Society last year. Adopted.

On motion of Dr. Hurxthal, it was

Resolved, That the Librarian be authorized to deliver any number of extra pamphlets or addresses in his possession, to members of the Society applying therefor, on their paying the postage on the same.

Dr. C. P. Landon offered the following resolution:

Resolved, That a medal of the value of $50, with an appropriate inscription, be offered by this Society and awarded to the author of the best essay, by a member of the Society. The determination of merit, the subject of the essay, and the regulations of competition to be made by a committee hereafter appointed; their award to be made before the next meeting of this Society. Which was adopted.

On motion of Dr. Weber, it was

Resolved, That the author of any accepted paper read before this Society, be permitted to publish a copy of such paper in any one of the Medical Journals of the State.

Dr. Morehead, from the committee on Medical Societies, presented the following report:

The committee on Medical Societies, to whom was referred the constitution and by-laws of the "Union Medical and Surgical Society" of Alliance, requesting admission as auxilliary to this Society, beg leave to report, that the requirements of their by-laws, regulating the admission of members, not being in compliance with

the requisitions of this Society, advise the rejection of the application.

WASH. MOOREHEAD,
T. J. MULLEN.

Dr. Moorehead thereupon moved the adoption of said report, which was carried.

Dr. Wilson of Sidney, offered the following:

Resolved, That a committee be appointed, to report at the next annual meeting of the Society, on Obstetrical Instruments and Surgical Obstetrics.

And so it was ordered, and the chair appointed as such committee, Drs. Wright and Wilson.

Dr. McMillen offered the following resolution:

Resolved, That the Governor of this State be requested to call the attention of the Legislature to the so called "cattle disease," at present prevailing in New England, and recommend the appointment of a medical board for the purpose of investigating its pathology and treatment, and the best method of preventing its introduction into our State.

Resolved, That the Secretary be instructed to furnish the Governor with a copy of the above resolution.

A discussion took place between Drs. Baker, Wright, Crane and McMillen, after which the resolution was adopted.

Dr. Reeves had permission to read a paper entitled "A Report of three cases of diseases of the neck of the Uterus."

Dr. Boerstler moved that the paper be referred to the Publication Committee, with instructions to print, which was adopted after remarks on the paper by Drs. Baker, Reeves, Murphy, Taggart and W. W. Dawson.

On motion, the Society took a recess.

TWO O'CLOCK P. M.

The Society resumed its session.

Dr. E. L. Hill offered the following for adoption:

WHEREAS, Mr. Andrew Wilson, Jr., the proprietor of the Ohio White Sulphur Springs, has, at considerable trouble and expense, fitted up a commodious hall for the special accommodation of the Ohio State Medical Society at its present annual meeting, and in every way within his power has contributed so much to render the

deliberations of the society pleasant, and the sojourn of the members and their families agreeable, therefore,

Be it resolved, That the members of the Ohio State Medical Society do hereby tender to Mr. Wilson their sincere and heartfelt thanks for his efforts in their behalf; for the spacious, airy, and well-arranged hall, in the midst of one of most beautiful groves in the State, which he has placed at their disposal for their sessions; for the uniform courtesy and kindness received at his hands and of all connected with the Springs; and for the innumerable evidences they have witnessed of his peculiar adaptedness to render the Ohio White Sulphur Springs one of the most popular, as its natural advantages have already made it one of the most charming and lovely watering places in the country.

Which resolution was unanimously adopted by a rising vote.

Dr. Landon moved that the thanks of the society be voted to Henry Dinsmore, Esq., the reporter for the Cincinnati Gazette, for his faithful report of the proceedings of this meeting. Adopted.

Dr. Carey moved that the publication committee be requested to publish the names of all members. Adopted.

On motion of Dr. Murphy, it was

Resolved, That the Publication Committee be requested to publish one thousand copies of the valedictory address of Dr. Friestone.

The chair announced the following committees:

Standing Committees.

Executive.—H. G. Carey, of Dayton; S. Bonner, of Cincinnati; W. L. McMillen, of Columbus; G. C. E. Weber, of Cleveland; W. P. Kincaid, of Neville.

Publication.—R. Gundry, of Dayton; W. W. Dawson, of Cincinnati; R. Thompson, of Columbus; John H. Rodgers, of Springfield; T. B. Williams, of Delaware.

Finance.—E. B. Stevens, of Cincinnati; A. Metz, of Massillon; R. G. McLean, of Lockbourne; J. G. Rodgers, of New Richmond; A. Wilson, of Sidney.

Medical Ethics.—W. Morehead, of Zanesville; A. C. McLauglin, of Tremont; T. L. Wright, of Bellefontaine; A. Dunlap, of Springfield; F. T. Hurxthal, of Massillon.

Medical Societies.—G. F. Mitchell, of Mansfield; W. Judkins, of Cincinnati; T. J. Mullen, of New Richmond; W. Morehead, of Zanesville; W. F. Wilson, of Ironton.

Special Committees.

Surgery.—G. C. Blackman, of Cincinnati; W. L. McMillen, of Columbus; C. McDermott, of Dayton.

Obstetrics.—J. D. Cotton, of Marietta; G. W. Bœrstler, of Lancaster; P. Allen, of Kinsman.

Diseases of the Eye.—A. Metz, of Massillon.

Obituaries.—L. Firestone, of Wooster; J. Crane, of Ashland; J. Delamater, of Cleveland.

Practice.—John A. Murphy, of Cincinnati; C. P. Landon, of Westerville; E. Gaston, of Morristown.

Prize Essays.—M. B. Wright, of Cincinnati; S. G. Armor, of Dayton; R. Rodgers, of Springfield.

Obstetrical Surgery.—M. B. Wright, of Cincinnati; A. Wilson, of Sidney.

Insanity.—R. Gundry, of Dayton.

Medical Literature.—S. G. Armor, of Dayton; E. L. Hill, of Oxford; M. Effinger, of Lancaster.

Diptheria.—W. W. Dawson, of Cincinnati; D. Noble, of Sugar Tree Ridge; S. Hart, of Marietta.

Scarlatina.—T. L. Wright, of Bellefontaine.

On the Microscope.—G. C. E. Weber, of Cleveland.

Uterine Diseases.—G. W. Bœrstler, of Lancaster.

Laryngeal Phthisis.—R. R. McMeens, of Sandusky.

Dr. Murphy presented the following resolution:

Resolved, That the President appoint a committee of five to collect statistics in regard to eating opium and other narcotics, to report at the next meeting.

The motion was carried, and the President appointed, to serve on such committee, the following gentlemen: Drs. C. G. Comegys, of Cincinnati; S. Loving, of Columbus; J. Davis, of Dayton; J. P. Kirtland, of Cleveland; R. R. McMeens, of Sandusky.

Dr. E. B. Stevens, from the Committee on Finance, submitted the following:

The Finance Committee report, in reference to the case of Dr. Sinnett, that we find the payment of the annual assessment for the years 1856 and 1859 in dispute; and after a careful examination of all the circumstances, we cannot regard the evidence of such payments satisfactory, though we have no intention in this of

calling into doubt the veracity of either of the parties interested. In view of the special circumstances of the case, however, we recommend the assessment for 1859 to be declared remitted.

E. B. Stevens,
J. G. Rogers,
A. Metz,
Finance Com.

Which report was, on motion, accepted, and the committee discharged from all further consideration of the subject.

On motion of Dr. Hurxthal, it was

Resolved, That the Secretary be authorized to issue certificate of appointment, as delegate of this Society, to the Indiana, Kentucky or Illinois Medical Society, to any member of this Society who may be within either of these States during the meeting of such Society, and may desire such appointment.

Dr. Landon moved that the thanks of this Society be given to the presiding and other officers of this Society, for the care and impartiality with which they have discharged their duties during the present meeting.

The motion being put by the mover, it was carried.

On motion of Dr. McDermott, it was

Resolved, That the thanks of this Society be voted to those railroad companies who have so generously offered to convey members attending this meeting at half fare.

Dr. Landon gave notice of an amendment to the by-laws, to the effect that the annual assessment may, if deemed necessary, exceed one dollar, the present limit.

Laid over until next meeting, under the constitutional rule.

The Secretary (Dr. Dawson) laid before the Society a letter from Dr. Mitchell, of Mansfield, regretting his inability to attend this meeting, and inclosing the Report of the Committee on Medical Societies; also an invitation to the Society to hold its next meeting at Mansfield.

On motion, the said report was referred to the Publication Committee, with discretionary power to print or otherwise.

On motion of Dr. Dawson, the Society adjourned.

National Convention for Revising the Pharmacopœia of the United States.

This convention held its fifth decennial meeting in the city of Washington on the 2d of May, 1860.

Dr. Geo. B. Wood, the president of the convention of 1850, was called to the chair, and Dr. Jno. C. Riley of Washington, appointed Secretary, pro tem.

A committee of five were appointed to nominate permanent officers, which reported the following:

President.—Dr. George B. Wood, of Philadelphia.

Vice Presidents.—Dr. Jacob Bigelow, of Boston, and Dr. Edward Warren of North Carolina.

Secretary.—Dr. Thomas Miller, of Washington.

Assistant Secretary.—Dr. J. C. Riley, of Washington.

Which report was adopted.

A committee on credentials were appointed, who reported the following delegates as present, viz:

From the College of Physicians and Surgeons of Philadelphia—Dr. George B. Wood and Dr. Robert Bridges.

From the New York State Medical Society—Dr. Caleb Green and Dr. E. R. Squibb.

From the New York Academy of Medicine—Dr. E. R. Squibb.

From the College of Pharmacy of the City of New York—John Meakim and William Hegeman.

From the Philadelphia College of Pharmacy—William Proctor, jr., A. B. Taylor and Edward Parrish.

From the Maine Medical Association—Dr. A. J. Fuller and Dr. H. T. Cummings.

From the Connecticut State Medical Society—Dr. George W. Russell.

From the Massachusetts Medical Society—Dr. Jacob Bigelow and Dr. Ephraim Cutter.

From the Jefferson Medical College—Dr. Franklin Bache.

From the University of Pennsylvania—Dr. Joseph Carson.

From the Medical Society of the District of Columbia—Dr. Thomas Miller and Dr. William G. Young.

From the National Medical College—Dr. John C. Riley and Dr. M. S. Lincoln.

From the University of Maryland—Dr. William E. A. Aiken.

From the Maryland College of Pharmacy—Alpheus P. Sharp.

From the United States Army—Dr. Lewis A. Edwards.

From the United States Navy—Dr. George Clymer.

The Report of the Revising and Publishing Committee, appointed in 1850, was read and referred to the Committee on Auditing Accounts of the Secretary and Assistant Secretary.

It was, on motion, resolved that such members of the two houses of Congress as are medical graduates be invited to attend the Convention and participate in its deliberations.

The delegates of several medical bodies represented in the Convention were then called on for contributions towards a revision of the National Pharmacopœia, when reports were handed in from the Massachusetts Medical Society by Drs. Cutter and Bigelow; from the New York State Medical Society, by Dr. Squibb; from the New York Academy of Medicine, by the same; from the New York College of Pharmacy, by William Hegeman, and from the Philadelphia College by William Procter, jr.

Mr. Parrish presented a report from the American Pharmaceutical Society, a body not incorporated and not represented in this Society; which was received.

These reports were referred to a committee, with directions to report a plan for the revision and publication of the Pharmacopœia; the committee to consist of Dr. Franklin Bache, Mr. Edward Parrish, Alpheus P. Sharp, Dr. Thomas Miller, and Dr. George W. Russell, of Connecticut.

The Convention then adjourned until 11 o'clock to-morrow.

THURSDAY, MAY 3D, 1860.

At 11 o'clock the chair was taken by Dr. George B. Wood, of Philadelphia, the President of the Convention.

The minutes of the meeting of the preceding day were read by Dr. Thos. Miller, the Secretary.

Mr. Procter, from the Committee on Credentials, reported the presence to-day of the following gentlemen, additional to those present yesterday: from the Delaware State Medical Society, Dr. F. H. Askew; from the Maryland College of Pharmacy, Mr. Geo. W. Andrews; from the Massachusetts College of Pharmacy, Messrs. Charles T. Carney and Robert R. Kent; and from the New York College of Pharmacy, Alex. Cushman.

Dr. Miller, from the Auditing Committee, stated that the report of the Revising and Publishing Committee appointed in 1850 has been examined and found correct.

Dr. Bache, from the Committee on a Plan for the Revision of the Pharmacopœia, brought in a report comprising a series of resolutions, one of which was that there should be a committee of nine (Dr. Wood to be one) to revise and publish the Pharmacopœia; also, that three be a quorum, and that the place of meeting be in Philadelphia.

On motion of Dr. Miller, the report was considered resolution by resolution, and was passed.

On motion of Mr. Meakim, it was resolved that a committee be chosen from each State and Territory represented, ten in all—to nominate eight members of the committee on revision and publication of the Pharmacopœia.

On motion of Dr. Bache, a recess of ten minutes, to confer with the President on the subject of appointing the Nominating Committee, was had, after which the meeting resumed, and the Chair gave the names of the Committee.

On motion of Dr. Bache, a committee of five, to be appointed by the Chair, should be charged with the duty of reporting on a plan for organizing the convention of 1870.

The committee thus constituted consisted of Drs. Bache, Squibb, Miller, Andrews and Carson.

A recess of fifteen minutes was taken to allow the two committees to consult and report.

On coming again to order, Dr. Askew read the report of the Nominating Committee, which proposed for the Committee on Revision and Publication of the Pharmacopœia, the following gentlemen:

Dr. Franklin Bache, of Philadelphia; Dr. E. R. Squibb, of New York; Dr. C. T. Carney, of Massachusetts; Dr. Geo. B. Wood, of Philadelphia; Dr. H. T. Cumming, of Maine; Mr. Wm. Procter, of Philadelphia; Mr. Jos. Carson, of Philadelphia; Mr. Wm. S. Thompson, of Baltimore; and Mr. A. B. Taylor, of Philadelphia.

The report was accepted, and its nominations confirmed.

The committee to make arrangements for the convention of 1870 reported through its chairman, Dr. Bache, that the same rules as adopted in 1850 for the present convention be taken, by simply changing dates.

This report was adopted.

Mr. Wm. Hegeman, of New York, moved to ask an expression of the opinion of the Convention in reference to the subject of a bill now before Congress, to provide for the greater security of the medical profession and the public in the matter of importation of drugs and medicines.

Dr. Bache, whilst acknowledging the great importance of the matter, deemed it not germane to the objects of this Convention, and therefore moved to lay the subject on the table; which was accordingly done.

Mr. Meakim called the attention of the convention to a proposition of the New York College of Pharmacy, which he embodied in a resolution, and moved—

That in the index of the Pharmacopœia, the syllables of both Latin and English names be so divided and accented that the index may also serve as a pronouncing vocabulary to the Materia Medica; which, after discussion, was adopted.

Mr. Meakim next called the notice of the convention to its title of the "National Medical Convention,,' &c., &c., and moved to change to "The Pharmacopœia Convention."

Dr. Bache proposed merely to strike from the present name the word "Medical;" which was put to the vote and carried unanimously.

So the convention will be called "The National Convention for Revising," &c., &c.

On motion of Mr. Procter, a contribution was then made by each of the members present, to defray the expenses of the convention.

The President took the opportunity to explain that the vote on the resolution of Mr. Meakim was merely a recommendation to the Committee on Revision and Publication, and not an instruction.

Mr. Procter spoke in favor of having a low-priced edition of the Pharmacopœia for more general distribution among pharmaceutists, which would do much to insure uniformity of preparation of medicines, &c.

The subject was discussed by the President, Dr. Bache, and Mr. Procter, when the matter seemed to be remitted to the discretion of the Committee on Revision, who were stated by the President to be always anxious to furnish an edition at the lowest price at which it could be done.

Dr. Parrish introduced the subject of uniformity of weights and

measures by the medical profession and by the apothecaries of the country. He advocated making the avoirdupois ounce the standard of weight, as was advocated in England.

The president thought the convention could not discuss this subject with profit in the short time allotted to it.

Mr. Meakim thought it best to begin now if anything was to be done in the future.

Dr. Bache called up Mr. Taylor, of Philadelphia, who had written with much learning and effect on this subject.

Mr. Taylor then addressed the Convention in advocacy of abolishing the troy and avoirdupois scales now in use, and substituting the grain as the unit for all weights less than a pound avoirdupois; beyond that he would use pounds. He would also do away with the Roman symbols, and use the common Arabic figures. He thought this better than the plan now proposed in Great Britain.

Dr. Squibb read an extract from the united proceedings of the New York Academy of Medicine and the New York College of Pharmacy on this subject.

Mr. Parrish advocated the abolition of the present anomalous weights, and was in favor of the avoirdupois ounce and pound.

Mr. Procter also favored the avoirdupois measure as the only one to be used.

Dr. Bache thought it better, for the sake of uniformity, to wait the action of the British commissioners on the subject of the consolidation of the London, Edinburgh, and Dublin Pharmacopœias into a British Pharmacopœia. He was himself against changing the troy grain, and hoped the British commissioners would not. He preferred the French system of *grammes, centigrammes,* doing away the *decigrammes;* but as there was little hope of this system being adopted in Great Britain, it would be best to wait and see what was done there before we act.

Mr. Meakim advocated the "grain" standard.

Mr. Parrish preferred the ounce.

Mr. Procter said that even in France now, in many of their best works on pharmacy, they reject the decimal division, and go back to the old ante-revolutionary measures.

The subjects of weights and measures was then dropped.

After a vote of thanks to the President and Secretary, and Assistant Secretaries, the Convention adjourned *sine die.—Med. News.*

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

Lectures on Experimental Pathology and Operative Physiology, delivered at the College of France, during the Winter Session 1859–60, by M. CLAUDE BERNARD, Member of the French Institute; Professor of General Physiology at the Academy of Sciences.

GENTLEMEN:—In my first lecture I made you acquainted with the course which I proposed to carry out in the study of Experimental Pathology, and I endeavored to show you how difficult it was to enter on the study of so complex a science as that of Medicine, without having previously acquired a preliminary knowledge of other sciences less complicated in their nature; lastly, I endeavored to combat an opinion, too generally entertained, viz: that physiological phenomena belong to an order of facts entirely foreign to those which occur in the morbid state.

We shall now enter on the study of the symptoms peculiar to the pathological state, the agents which give rise to them, and those calculated to bring about their removal; lastly, we shall produce all the phenomena of disease by artificial means, and shall then endeavor to make them disappear.

But, before entering on this subject, it is indispensable to ascertain whether everything which occurs in a state of disease can be explained on physiological grounds; or, whether disease has the peculiar property of originating, in the living being, laws altogether new, and of which we have not the slightest idea as existing in a state of health.

If, in the case of an adult in the full enjoyment of all his faculties, we ask ourselves what is the regulating agent, what the *primum mobile* of all physiological actions, we are constrained to reply that its seat is in the nervous system. It is to the nervous system that we owe both sensibility and voluntary motion, that two-fold source of all our relations with the external world; it presides over all organic functions, and it is my intention to prove to you, that while it is the origin of all the normal phenomena of life, it is also that of all pathological action.

In proportion as we ascend in the scale of animal life, we see the nervous system acquire greater development, and at the same time we observe that diseases become more frequent, more variable in their form, and more complicated in their nature. Why should this coincidence astonish us? Are not all our organs dependent directly on the nervous system? If we take, one by one, the differ-

ent systems of the animal economy, it will be easy to show that all the symptoms of the diseases to which they are liable, may be produced by direct irritation of their corresponding nerves. We can even give rise, in this way, to all the anatomical lesions by which they are characterized.

What, for instance, are the principal signs of the affections of the respiratory organs? Cough, dyspnœa, increased bronchial secretion; are not these the symptoms which most frequently proclaim their existence? Now all these phenomena can be produced at will by the direct excitation of the pneumogastric or certain other nerves; we can even call into existence the anatomical lesions incident to pleurisy and pericarditis. The causes of these morbid changes would therefore appear to be intimately connected with the nervous system. If we now turn our attention to the digestive apparatus, we shall soon be convinced that the physiologist possesses the same power relative to it, as he does in the case of the respiratory organs. By exciting the solar plexus and its efferent branches, we can determine both diarrhœa and dysentery, together with the anatomical lesions which habitually accompany them. Acute peritonitis has even been induced with all its consequences, as evidenced on opening the animal, by the presence of pus and false membrane in the peritoneal cavity.

Thus, then, a multitude of diseases may be brought into existence by a simple modification of the elements which the animal economy originally contains, without having recourse to the introduction of any new principle; and, if we were to examine the other systems of the body, results analogous in their nature would be obtained. Fever itself, that essentially medical symptom, can be excited by a mere mechanical irritation of the nervous system, and the products of inflammation, such as pus, false membranes, and plastic exudations, may, any or all of them, be called into existence in a similar way. In an animal, previously enfeebled, we can produce directly pleuritis with purulent deposit, by the simple division of the great sympathetic nerve; in order, however, to insure success in this experiment, it is absolutely necessary that the state or condition of the animal's health should be previously lowered.

It is, therefore, a fact, that the perverted state of the nervous system gives rise to a great variety of diseases, not only of a general, but also of a local character: deprive a muscle or a bone of its nervous supply, and you will have, as a consequence, fatty degeneration in the one case, and rickets in the other; in fact, if you tie the nerves, which enter the nutritive foramina of a bone, you will very soon see the cells of the lamellar structure increase in size, the vessels become more numerous, and all the phenomena of rickets follow in rapid succession: we can even bring about these results on *part* of a bone, without interfering with the remainder. This experiment has been successfully carried out, in the case of the lower jaw, by M. Schiff, of Berne.

But there exists in disease an immense number of other phenomena

which, at first sight, it appears impossible to produce by a simple lesion of the nervous system; I allude especially to the alteration or modification of the fluids of the body, which takes place in the course of certain maladies. Now, I am prepared to demonstrate that a vast number, if not all, of these morbid changes, are still to be traced to the action of the nervous system, and that they can be reproduced at pleasure by the physiologist. Among the various fluids of the body, the urine is that one the morbid changes of which have been the most carefully and completely investigated. Now you are perfectly aware, gentlemen, that albuminuria, polyuria, and diabetes are invariably produced by excitation of definite points of the medulla oblongata, the peculiar form of the perverted urinary secretion being determined by the particular portion which is acted on: it is in the case of diabetes especially that the importance of this experimental fact is fully brought out. It was supposed that in diabetic patients the morbid state created entirely new conditions in the economy, which gave rise to the pathological production called sugar; it is now, however, admitted on all hands that these phenomena are fully explained by the mere exaggeration of a normal function, in virtue of which glycose is generated in every individual even in a state of health. It is therefore evident that disease, in this case, is nothing more nor less than an exaggerated natural function.

There exists, however, a certain number of pathological products and morbid manifestations which we have not been able to imitate by the employment of artificial means. Shall we be able, at a later period, to connect these facts with those which already fall within the range of experimental physiology? Such is the scientific problem of the day. The question is, whether we shall, one day, be able to embrace pathology in its entire extent, within the compass of biological explanations, or whether we shall, in addition to all which we can imitate or explain, forever be compelled to recognize a *special principle,* mysterious in its nature, which we must acknowledge as a morbid or vital phenomenon?

Let us take, for example, eruptive fevers, small-pox, scarlatina and measles; these are diseases, indeed, which it is impossible for us to produce without having recourse to a special virus. Shall we, one day, be able to realize this undertaking without the intervention of the peculiar animal poison on which they seem to depend? Must we not, first of all, solve the question, whether such diseases as those we have just specified can possibly exist in animals, even in those which approach most closely to the human species? Are they not in reality the exclusive property of the human organization?

Nothing is more difficult than to produce, through the agency of the nervous system, eruptive diseases in animals, the vitality of the skin of which is essentially different from that of man. We can, nevertheless, produce ecchymosis, congestions and glandular swellings; but it must always be borne in mind, that each particu-

lar species of animal has its own peculiar diseases, which cannot be transmitted to a neighboring species, however closely allied they may be. Now man, in himself, presents a greater number of special diseases than all the other animals taken together.

Fortunately for physiology, such incompatibilities are rather the exception than the rule. Tubercle, cancer, and many other morbid productions, are found equally in animals and in man. Every disease which gives birth to morbid tissue is evidently a perversion of the nutritive function; now, who will venture to deny the influence which the nervous system exercises over this physiological act? We must, therefore, advance resolutely in the path which lies open before us, without allowing ourselves to be disheartened or intimidated by the difficulties of our science. But we must bear in mind that a disease is not characterized by one single symptom; it consists rather of a complete series of symptoms, standing to each other in the relation of cause and effect. It is, in fact, a morbid evolution which offers a commencement, a middle, and an end; so that a skillful and practiced observer, on witnessing the first stage of a disease, can predict its probable termination. This is no doubt true; disease does not consist in an isolated symptom; it is a collection of symptoms. Now these reunions of morbid phenomena, we indubitably succeed in reproducing in animals. The functions of life are modified in various ways by a variety of different agents. Poisons determine real disease which present an unbroken chain of symptoms, consequent on the introduction into the system of the toxic agent. Here, therefore, we find an entire class of diseases which can be produced at will.

But setting aside this question of such vast dimensions, and to which we shall revert at a later period of our course, let us inquire whether, by mere surgical operations, by mere mechanical lesions, we can determine on the animals subjected to experiment, a certain number of morbid series. If you simultaneously remove the two kidneys of a dog, or simply tie the renal arteries, you immediately produce a general disturbance in the entire economy. The animal is powerless in expelling the excrementitial product which should pass off by this channel, and the whole system becomes gradually poisoned. At first the animal is not seriously affected; it continues to eat and digest its food for a certain lapse of time, which corresponds with the period of incubation in diseases; by-and-by it is attacked with vomiting and purging, shortly after which it dies.

What takes place in a case like this? Let us endeavor to explain it. During the first period the urea, which can no longer be eliminated by the kidneys, is expelled by the intestines. It is found, together with the salts of ammonia, in the animal's excrements, and even in the gastric juice. If this new mode of elimination could be prolonged indefinitely the animal would not become diseased—it would not die; but very soon the mucous membrane of the intestines, irritated by the constant contact with the ammoniacal salts, gives rise to morbid changes. On the other hand, as

long as the urea is eliminated by the intestines, it does not find its way into the blood. This fact has been demonstrated experimentally by MM. Prevost and Dumas, who have not, however, succeeded in explaining it. Now, at a later period, when the mucous lining of the intestine refuses to continue this function, which is altogether foreign to it, the urea finds its way into the blood, and the animal soon expires, comatose and convulsed.

When the cessation of the urinary secretion depends on the ligature of the renal arteries, this state of things may sometimes be obviated by removing the ligatures; the self-same thing would also take place in man, if there existed an obstacle to the passage of the urine, and if it were possible to remove that obstacle; but in all cases in which the kidneys have been removed, death has always supervened. The destruction of the animal has been the invariable termination of the morbid series.

Here, then, we have a disease which can be artificially produced; but there are many others, the causes of which are agents existing exterior to the body; contagious affections belong to this class. The fact has been experimentally proved in the case of the peripneumonia of horned cattle, by the establishment of a communication between two cow-houses—the one containing healthy, the other diseased cattle. In the inclosure, which, in the first instance, contained only healthy cattle, several cases of this peculiar affection occurred in succession.

But independently of these various causes, the action of which I am far from being disposed to deny, internal accidents occur, and give origin to various affections in the economy. This has been experimentally proved; if you remove both the kidneys of an animal it dies; if you remove, however, only one kidney, the animal continues to live; the organ becomes enlarged, and plays both its own part and that of its absent fellow; a fact which can be easily ascertained by opening the animal a certain time after the operation has been performed. But if, instead of removing the kidneys, you simply make a division of their nerves, the animal dies. During the first few days which follow the operation albuminuria is produced; shortly after, inflammation of the kidneys sets up; they then mortify and become decomposed; so that, finally, they act on the economy like a septic poison, which inevitably leads to death. Such I consider to be the natural explanation of this *apparently* mysterious fact.

I now presume that I have established the initial proposition: Not only can we succeed in producing morbid symptoms in animals by artificial means, but even actual diseases, with their complete chain of results. Pathology, regarded from this point of view, combines the resources of physiology with those derived from clinical observation.

Do Bad Smells Cause Disease?

The tendency of the human mind to rest satisfied with any belief that is authoritatively asserted, is too well known to require any comment. Philosophers of all kinds are no more exempt than other people from this easy style of dealing with difficult problems. Medicine is, we think, especially chargeable with cherishing pet answers to questions that force themselves unkindly on her; and we think that the way in which she has made up her mind as to the causes of various kinds of fevers is an example of this style of cutting the Gordian knot.

Of late years, it must have struck all our readers that pig-styes, dirty pools of water, open privies, ash-heaps, etc., have been declared highly criminal, and on all occasions even adjudged guilty of producing any kind of fever or bowel complaint that may have broken out in the neighborhood. If a child happen to suffer typhus in a farm-house, it is the mixen at the end of the barton that caused it. If an epidemic of English cholera befall a village, it is traced to the duck-pond by the road-side. If in a wealthy household the inmates are stricken with diphtheria, some open sewer, close at hand, has, as a matter of course, been the cause. So accustomed are we to hear this sort of reasoning resorted to on all occasions, that one feels a little difficulty in expressing doubts as to the certainty with which the effect is unhesitatingly traced to its cause. Nevertheless, we think there is at least sufficient evidence to cause reflecting minds to pause ere they give in their adhesion to the general opinion, and thus shut their eyes to further research and inquiry. Dr. Watson, has, we know, stated it as his distinct opinion, "*that neither animal nor vegetable decomposition is sufficient to generate fever of any kind;*" and the researches of Dr. Guy, and other observers, have certainly gone some way to support that opinion.

Dr. Guy, in his very interesting contribution to the *Journal of the Statistical Society*, on the health of night-men, scavengers, and dustmen, gives us a mass of statistical facts which, it must be confessed, run counter to the generally received opinion, that foul animal or vegetable emanations are the fruitful source of disease. This class of men, without doubt, spend their days in the very midst of filth of all kinds. He says:

"In most of the laystalls or dustmen's yard's every species of refuse matter is collected and deposited—night-soil, the decomposing refuse of markets, the sweepings of narrow streets and courts, the sour-smelling grains from breweries, the surface-soil of thoroughfares, and the ashes from the houses."

This heterogeneous mass the scavengers or "hill" people have to sort or to pass through sieves, so that the emanations arising therefrom must be brought into intimate relation with their lungs and skin. If fever and diarrhœa are so clearly traceable to the vicinity of these so-called noxious materials, surely the scavengers ought to be a poor, fever-stricken race. A medical examination, however,

of this class of workmen as compared with brickmakers and bricklayers' laborers, proves that the scavenger is comparatively exempt from disease. Thus, among a number of men examined in each of the three classes, it appeared that the numbers attacked by fever were, among the scavengers, 8 per cent.; among the bricklayers' laborers, 35.5 per cent.; and among brickmakers, 21.5 per cent.

This result seems extraordinary enough; but it may be argued that these men do not live in the laystalls or dustyards, and therefore that their exemption from fever may be attributable to this; but what can be said if the master dustmen and their families, who live all their lives in the midst of these heaps of so-called fevernests, are healthy. Dr. Guy says:

"I do not think that, whether in town or country, such another body of men (as master dustmen) could be brought together, except by selection; and it is not going too far to assert of them that, if the comparison were limited to the city of London, or our large towns, no score of selected tradesmen could be found to match the same number of scavengers brought casually together."

Unless we suppose that the scavengers get used to this so-called miasmatic atmosphere, or that after a time it no longer affects them, we cannot see how the foul emanation theory can hold water. Nature cannot work in one place differently from another. Nightsoil must be just as deadly in an open yard in London as in the country. But here we have the experiment tried on a larger scale, of a whole class of men subjected to foul emanations, and yet they are far from being an unhealthy race, and are not nearly so prone to fever or bowel disease as the brickmakers' laborers.

We are far from wishing it to be understood, however, that we do not consider foul emanations as dangerous or baneful under any circumstances. In our opinion, they become noxious when much concentrated. Our houses, for instance, are built on the principal of a bell-glass, and our drains and privies, and all other impurities, if allowed to give off a deleterious miasma, most certainly do become most virulent sources of disease. But, in the open air, we think it very doubtful whether these emanations are ever the cause of injury to man.

Let us watch with Dr. McWilliam a still more gigantic experiment on the health of the Thames waterside people, which has been going on for years, and is still proceeding. The whole sewerage of two millions and a half of people, has, within the last ten years, been turned into the metropolitan stream. Year by year its waters have become more contaminated, and its smell more disgusting. It should follow that the health of the waterside community is proportionally decreasing; that febrile complaints, cholera, and diarrhœa, are alarmingly on the advance. But what is the real state of the case? Dr. McWilliam, in his report for the year 1858, on the health of the Water Guard and Waterside Officers of Her Majesty's Customs, says:

"As respects bowel affections, in which I include diarrhœa,

choleraic diarrhœa, dysentery, etc., the types of those forms of disease, which in this country noxious exhalations are commonly supposed to originate, we find the additions during the four hot months of the past year from this class of complaints 26.3 below the average of the corresponding period of the three previous years, and 73 less than those of 1857."

The quantity of putrescent animal and vegetable matter in the Thames has been going on increasing; but the illness generally attributed to the emanations arising therefrom has been decreasing! We know that many will urge that all the combustibles (if we may use the term) being thus accumulated, it only requires the match to be applied, to find epidemics raging like wildfire. But the year before last, cholera did break out on the banks of the Lea, and there died out, apparently from want of sustenance. This year, according to the *Lancet*, cholera, veritable Asiatic cholera, has been on board the Dreadnaught; yet it has not spread, and there seems no likelihood of its doing so for this season at least. As Dr. McWilliam truly says, "it is nowhere sustained by evidence that the stench from the river or docks, however noisome, was in any way productive of disease." It is true that one waterman, in June last, was said to have died of Asiatiç cholera, and that his death was ascribed to river poison; but, as the eminent observer whom we have just quoted, correctly remarks, "it is opposed to all analogy, and to the usual order of nature, and therefore unphilosophical, to suppose that a cause so extensively diffused should have been so singularly limited in its effect."

Greatly doubting, as we do, the alleged ill effects of foul emanations in the open air, upon human life, we nevertheless do not think that the crusade against filth should for one moment be relaxed. A bad smell may be no more unhealthy than a bad taste; but we should, if possible, avoid the one as much as the other. What we should, above all things, avoid, however, is the falling into the error of supposing that bad smells are the indubitable sources of many puzzling diseases, and of thus hardening our minds against investigations of the kind which were instituted a year or two ago by Dr. Barker, and which, when completely carried out, will enable us to decide what the noxious principles are which make all the difference between an unpleasant and a malarious odor.—*Chicago Journal.*

Treatment of Vaginitis by the Glycerole of Tannin.

In a long memoir on glycerine and its applications to surgery and medicine, M. Demarquay gives the results of his numerous experiments on the use of this therapeutic agent. We extract from his work the following passage, on the treatment of vaginitis:

Every one is aware that vaginitis is a stubborn complaint, and extremely difficult to bring under treatment; we however believe

that we have established a treatment by which this disease can be controlled, and whose efficacy is such that during the four years in which we have employed it, we had not one refractory case. The treatment consists in the application of pledgets of lint steeped in glycerine, tannated according to this formula :—

Glycerine,	30 grammes;
Tannin,	10–20 "

The Tannin is entirely dissolved by the glycerine, and the result is a substance of a beautiful brown color, inclining to yellow, transparent, of a semi-liquid consistence, very readily imbibed by layers of charpie or of cotton, and after application not draining out from them, even when held in the vertical position.

The application is made in the following manner: The speculum having been introduced, a large injection of water is made, for the purpose of removing all the mucus and pus which is spread over the vaginal walls, which are then dried with a pledget of lint placed at the end of a long stick. I then introduce one or more tampons of wadding well steeped in the tannated glycerine, besides a dry tampon destined to retain the small drops which may escape from the first. I withdraw the speculum, and leave the matters in this condition till the following morning. The tampons are then withdrawn, the patient having first taken a simple bath, and I renew the application exactly as I had done it before. Four or five such applications serve to accomplish a complete and definite cure. However, as simply a precutionary measure, after the last application of glycerole of tannin, I advise every patient for a week longer to make injections two or three times a day of a decoction of walnut leaves, with the addition of four grammes of alum to the pound.

In some cases this application cannot be immediately applied, as the inflammation is so extremely acute as not to permit the introduction of the speculum. In such I commence by treating the inflammation by an appropriate diet, baths, and soothing injections frequently repeated.

Following the regulations which we have specified, our tamponing is not only not painful, but also incommodes but few patients. They can rise and remain in the upright position part of the day. The local effect of glycerole of tannin shows itself by the following syptoms:—Coagulation in some measure of the mucus-pus which is secreted; change of color in the mucus of the vagina which loses its inflammatory redness; dryness of the vaginal walls and tightening of the wall membrane; disappearence of pain and issue.

I have had opportunities of using this treatment in the Municipal Hospital and in my private practice, and I repeat that I have not seen in the space of four years, a single case of vaginitis which has proved obdurate. Several physicians have employed it with the same success as I have had, and I have no doubt whatever that any one following the directions I have given above will obtain results similar to those which I meet with every day.

M. Aran has tried simple glycerine in injections into the vagina

and womb, for ulcerations of the neck of the uterus and uterine catarrh. The injections into the womb proved very painful, on which account it had to be given up. These trials having been made with glycerine alone, it is possible that the pain which annoyed M. Aran's patients was due to an impurity of the article. Now that we can so easily obtain pure glycerine, this point is in a fair way to be proven. As regards ulcerations of the neck, they have not been sensibly modified. We have tried for our part the application of tampons steeped in simple glycerine, but the results have been so far from encouraging that we have not pursued this line of treatment any further.—*L'Abeille Médicale.*

Condition of the Interior of the Eye as seen by the Ophthalmoscope in an Impaired Vision from Blows.

For several months Mr. Haynes Walton has submitted to a careful ophthalmoscopic examination every case that has presented itself to him of defective sight from a blow on the eyeball; and in all there have been marked physical changes that could be directly pointed to as disturbing sight. The fact is, so far as it goes in opposition to the idea of concussion of the retina, by which was meant some functional derangement, to which the result of these accidents used to be attributed.

Lesion was noticed in all. In the majority, there was more or less detachment of the retina, probably from effusion of blood. The degree of loss of sight was in proportion to the area detached. Less frequently, there was blood effused into the vitreous body. Once the lens was partially displaced backwards, but retained its transparency. The detachment of the retina is, of course, irremediable; effusion into the vitreous body admits of recovery in a remarkable degree; and, even where there has been so much effusion as to prevent illumination of the eye, perfect vision may be restored. This shows how useless it would have been in any of these cases to institute the routine of a mercurial course, which certainly would have been resorted to prior to the ophthalmoscope.

Very few of the patients were submitted to any treatment, because of the lapse of time between receiving the injury and their application at the hospital. Mr. Walton's plan of treatment, in any recent case in which there is diminution of sight, or pain attendant on the accident, consists in rest of the eye, and cessation from all activity of the body, the local application of cold, and, if there be very much pain, of opiates, and perhaps even leeching or cupping to the temple. With this he enjoins regulations of a general kind as regards diet, the avoiding of stimulants, etc.

Wounds and blows about the forehead and circumference of the orbit, which do not touch the eyeball, may be followed by blindness; and many theories have been advanced to account for this.

It has been supposed that the nutrition of the eye suffered through some injury to the branches of the fifth nerve. Mr. Walton suspects that here the eye suffers from the same lesions as in direct injury, although up to the present time, he has had but one opportunity of making an examination.

A workman, in middle age, was severely struck on his forehead, just over the left eyebrow, six years ago; and quickly lost all useful sight. He could not exactly say how quickly it went, as his memory did not serve him; but it was a direct consequence, and when the swelling of the brow and the ecchymosis had passed away, the eye was useless. It would be difficult to name any method of treatment that had not been tried; for the man had been to most of the general hospitals in London, and to several of the special ones. He could not read type of any size, but could just count his fingers when they were held up against the light. There was no objective symptom whatever; and therefore it was impossible, from a mere external survey of the eye, to say what was at fault. Mr. Walton directed the pupil to be dilated, and then used the ophthalmoscope. Detachment of the retina was at once discernible in a cloudy whiteness at the fundus of the eye, instead of the natural bright red color of the choroid. The focussing of the instrument, too, failed to show the optic disk, or any parts in detail; instead of these, there appeared the uneven white cloud with a few vessels, not very definite, in irregular arrangement. Here was of course, an irremediable injury from the first; and far better would it have been for the patient, and more to the credit of surgery, had this been at once made out.—*British Med. Journal*, Aug. 13th, 1859.

Acupressure for the Arrest of Hemorrhage.

At a late meeting (April 24th, 1860,) of the Royal Medical and Chirurg. Society, Mr. Syme, of Edinburgh, in reply to a question by Mr. Henry Thompson, said that acupressure was not, in his opinion, calculated to improve the practice of surgery. In the first place, he did not think the objections alleged against the ligature were fully justified; in the second place, if the ligatures were objectionable they had a better substitute for it in torsion than in the needle process; thirdly, he thought the needle process was hardly practicable, and in some cases not practicable at all. It had been said by the proposer of the method that the ligature would occasion gangrene. That simply showed that the individual who proposed it did not know the meaning of surgical language. As to ligature causing irritation, that assertion was not true. He had repeatedly tied the femoral, and left the wound to heal by first intention, there being only a few drops of matter, and in one case not a drop, showing that the ligature was not the cause of irritation. He had given up the practice of cutting away one thread, always

preserved both; and he regarded ligatures rather as useful assistants than as obstacles. After amputation, the great impediment to union by the first intention was the presence of blood, which coagulated, and led to the formation of abscess. The ligatures prevented this, made way for the discharge, and did good rather than harm. But if ligatures were sometimes objectionable, the process of torsion was a convenient substitute, the success of which he had repeatedly seen. As to the acupressure, it could very rarely be employed; and his only surprise was that any practical surgeon should have given it two thoughts. It was a tub thrown out to amuse the whale, more especially to feed the whale, and would never have been heard of had it not been brought under the notice of the profession by a medical journal published in London, understood to be under the control of the proposer.

Mr. Spencer Wells said he should not notice the personalities with which Mr. Syme concluded his speech; but with regard to acupressure he thought it but just to say that he had employed that method in a case of Pirogoff's amputation at the ankle-joint, in which the needle was fairly pitted against the ligature. The anterior tibial artery was compressed by the needle, and a plantar branch of the posterior tibial was tied by a ligature. The superiority of the needle was most marked. In forty-eight hours Mr. Adams, whose case it was, removed the needle, and there was no more trouble about it. The ligature remained some five or six days afterwards, setting up suppuration in its track, and keeping open the wound in the manner which Mr. Syme appeared to think so favorable (the patient thought otherwise), but which certainly delayed the cure. The case would have been better treated if it had been easy to compress the posterior tibial artery in the same manner as the anterior tibial, if he had not to learn the A B C of acupressure, as all must do. There might be many cases in which the needle is not applicable; but he believed if he had known then what he had learned since, he might have been able to compress the plantar artery as easily as the other. So far from the introduction of acupressure exhibiting any want of surgical knowledge on the part of the gentleman who proposed it, he believed it to be one of the many gifts, including the introduction of chloroform, for which surgery is indebted to that great man. Mr. Wells further expressed his conviction that acupressure will prove a most useful means of suppressing hemorrhage, and he had learned its utility in compressing varicose veins. He believed also that it will hereafter supersede the ligature in the treatment of aneurism. With regard to the effect of the ligature upon the ends of divided arteries, every surgeon knew that the part of the artery beyond the ligature must be killed by it, and that a piece of sloughy tissue cannot do any good when confined amid the living tissues of the body, however useful Mr. Syme might consider it to be.—*Med. Times and Gaz.*, May 5, 1860.

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

A System of Surgery; Pathological, Diagnostic, Therapeutic and Operative. By SAMUEL D. GROSS, M. D., Professor of Surgery, in the Jefferson Medical College, Philadelphia, &c., &c. Illustrated by nine hundred and thirty-six engravings, in two volumes. Philadelphia, Blanchard & Lea, 1859.

Some months have now passed since this work was issued. Its appearance has been extensively announced, and the work universally commended. These facts supercede the necessity of any thing like an extended notice. Though we have not perused the whole of the two massive volumes which constitute it, we have given attention to several different chapters which we suppose to be fair specimens of the whole. So far, every thing tends to commend it as being prepared with great care; a care which is manifest in the general arrangement of topics, the clear style in which they are discussed, and even the minor matters of punctuation, proof-reading, &c. It aims to be a complete and systematic treatise. It is impressed upon us, as the result of our partial perusal, that a great and noble undertaking is very rarely more perfectly consummated. We contemplate it with mingled satisfaction and pride, as a fit crowning of the noble career of its author. We confess that we have looked forward to it with some unpleasant apprehensions. Monograph after monograph, volume after volume, have emanated from the pen of Professor Gross, all evincing rich and varied experience and learning. It has seemed to us that his ambition for authorship was leading him over too much ground, and that in so soon appearing in this great undertaking, the result must almost necessarily be crude, and tend to mar, rather than enhance his fair fame. But if this work is thus characterized we are unable to find the proof of it. It is not necessary that we should commend it to the patronage of the profession. Destined as it is to be the great standard of American practice, no responsible practitioner can afford to be without it.

H.

PART FOURTH.

EDITORIAL AND MISCELLANEOUS.

American Medical Gazette, (*New York*). Dr. Reese.

A variety of other duties prevented us from taking any part in the last issue of the Journal; hence our silence with reference to the American Medical Gazette. Nor are we now without misgivings as to the propriety of a reply. We have no disposition to have even the appearance of underrating the profession of our own country. Besides, the *Gazette* looks as though it was capable, to some extent, of misrepresentation.

That the reader may recall to mind the issues between the *Gazette* and ourself, we will state, that in a previous number we alluded to the dangers threatening our *political* existence; to the fact that we appeared to be drifting towards a destruction of our Confederation. We deplored this state of things and remarked in connection therewith, that it was much to be regretted, on account of, among other things, the condition here of medical science. We stated, that, as yet, we had accomplished little or nothing; but that if not disturbed by "political revolutions," we would amount in time to something right clever. Over these remarks the *Gazette* made quite a flourish, ventilating its penchant particularly to the use of rough words and censoriousness. What we said was dubbed "*Hyperbolical Caricature*," and pronounced false. Very amiable this, truly! and then again, such language looks so much like what has to be used in the cause of truth!! We replied to the *Gazette's* "hyperbolical caricature," and, in order that we might not be regarded as dealing entirely in generalities, we asked it a series of questions. These questions it parades (April No.) with studied formality, and appends to each one what it regards, no doubt, as a complete answer.

Now in the first place, as the lawyers sometimes say, we demur to a large portion of the *Gazette's* answers, on the score that they

are too general, mean nothing. We are represented, for example, as asking this question:

"What have we, as a nation, discovered in Physiology?"

The *Gazette's* answer is:

"Much,—much every way; no time for specifications."

Of course, we and the Public, are enlightened by such an answer. We can all see at once what is alluded to! We were once enjoying a concert with a venerable Elder of the church, and having heard that he, at home, occasionally pandered to his musical taste, we asked him if he could not play the *fiddle.* "Yes," he replied, "a few." How could our curiosity need more? Full we were to the brim with satisfaction, and went on with our friend enjoying the concert, as well satisfied as if we had drawn out of him the secret for finding the *Philosopher's Stone.* But the *Gazette* says it has no time for enumeration of "contributions" purely American. Take time, my dear sir. We are in no hurry. We do not wish to see you weaken your cause by hurrying yourself. We *have* contributed to Physiology, but after deducting for theories pure, how much have we left? We were all on tip-toe of late, that with vivisections, the crucible, the microscope, &c., we were rapidly approaching a complete solution of the science of Physiology, when all at once we are thrown back by learning that we can have secretion without glands, circulation without heart or blood vessels, motion without muscles, and volition without a brain or nervous system.

In the propriety of another of the *Gazette's* modes of answering questions we do not fully concur. We are represented as asking:

"What new disease have we described?"

The answer of the *Gazette* is:

"Nothing new under the sun."

This we take to be a kind of an "*argumentum ad ignorantium.*"

Are not the editor of the *Gazette* and ourself *new* men? Or are we a couple of the sons of Adam, that "went under" some 6000 years ago, to appear again exactly at the time our services were most needed in keeping the world straight. If, therefore, we are not somebody else than ourselves, is it not likely that we would have *our* own diseases? Adam at one time had no maladies of any kind. Still was he not, while enjoying this enviable exemption, under the *same sun* that we are? Was Bright's disease of the kidneys known

previously to 1837? Who, before Hughes Bennet described Leucocythœmia? Such inquiries might be extended indefinitely.

The truth is there are *new* diseases, or what amounts to the same thing, diseases that are new to us. Diseases, and forms of disease, and complications that have not been noticed or described anterior to the nineteenth century. The human organism, from Adam until now, has been constantly undergoing change. Adam, even after the sentence of disintegration had been passed upon him, lived more than 900 years. So did some of the Patriarchs. Were the aberrations from the physiological standard the same then as now? Ligaments now get stiff, the bones become fragile, muscles wear out, and the brain softens at "three score and ten." America has its own flora and fauna. The white man here is an exotic; and, as a consequence, has not the transplanting process involved many important "alterations?"

In alluding to the condition of our Medical Colleges, we inquired whether or not we had any that were not still in the *formative* stage. The *Gazette* in reply states:

"The Universities of Pennsylvania, Nashville, and New York, *are out* of the formative stage."

In common with the rest of the profession, we are proud of these Institutions, but not more so than we are of a score of others that might have been named. But really, are either of the Institutions named, out of the formative stage? Is there no further room for improvement—nothing that needs perfecting still more? We doubt very much whether either of the renowned Institutions, to which our attention has been called, as having passed the "formative" stage, would authorize, or even thank the *Gazette* for its remarks. We hear that all of them still continue to issue diplomas to young men without inquiring a word with reference to literary education. Does this look like having passed the "formative" stage? Are colleges perfect, without room for improvement, that do not even demand as a pre-requisite to the degree of Medicine, that the candidate possess a respectable knowledge of his mother tongue. We do not blame the colleges in this matter. They do the best they can under the circumstances. They have to fix their machinery to work a part of the time on bad material. Then again, if we had the very best material, the colleges could not make the most out of it, as they are, at present, organized and conducted. The number of professors is too few,—the sessions too

short. Nathan Smith, once at Dartmouth, filled every chair in the school; and he likely did the different departments as much justice as six or eight professors now can. We commenced medical education in this country with two sessions of *four* months each as the time proper for imparting a knowledge of medical science. We continue with very slight modification the same usage. Is this length of time sufficient. Is there a Faculty living that can do justice to the science in double this length of time?

We do not wish to be invidious, but we will ask our cotemporary a few questions in regard to *New York University*, as this is one of the schools said to have completed the "formative stage" and the one, of those mentioned, that he is likely best acquainted with: What improvements has the University on the literary education of the student? what is the method of teaching? what number of professors, and how long the sessions? Has the faculty or any one of its members made any important discoveries, such, for example, as ascertaining what are the functions of the supra-renal capsules, pineal body, pancreas, spleen, liver? If so, let us have something out this way that it will be respectable to communicate to students. The organs named are certainly important, and would it be right to consider a school entirely "out of the woods" without being able to tell the student something about them?

The truth is, the University of New York is, like the rest of the colleges of the country, just, comparatively speaking, in its infancy. If it is blessed with a corps of industrious professors for a few hundred years, it may get a glimpse of things as they are. The idea that it has arrived to complete manhood, and susceptible of no farther improvement!!

For a few years, quite a zeal has been manifested in our country on the subject of *Microscopy*, and in referring to this fact we stated that, if we were not prevented by political revolutions from prosecuting this exquisite branch of physical science, we would in time know something about it. To this the Gazette replies:

"The science of Microscopy is yet in its infancy, but nowhere has it more ardent cultivators than in America, or more successful manipulators, *while in the manufacture of instruments we excel the world.*"

Excel the world in the manufacture of instruments! Well, that is news, to say the least of it, and quite refreshing, too. We are

aware that we have microscope makers in the country, and very good ones at that. Indeed, we take, in this connection, great pleasure in stating that the instruments manufactured by C. A. Spencer, of Canastota, New York, or by the firm of J. & W. Grunow, and *objectives* by Tolles, of Canastota, New York, are very excellent; and we say to our friends in search of even first class instruments that they can be obtained of the houses named, and at prices below the cost of those of foreign manufacture; for on foreign microscopes there is a duty of 30 per cent. and a number of other expenses, all of which may be avoided by purchasing at home.

But now, that our manufacturers *can beat the world*, as the Gazette alledges, is an assertion, as far as we can see, without any proof whatever. Has the Gazette been all over the world to see what the different nations are capable of in the way of making microscopes? Its remarks would seem to involve the idea that it had. Has it even made itself acquainted with what our near neighbors have done? Has it had interviews with Dolland and Lister, to whose discoveries we owe almost every thing pertaining to the acromatic microscope? The former gave us the *crown* and *flint* glass idea for objectives; the latter, the *doublet* and *triplet* combinations. Has the Gazette looked into the capabilities of the London microscope-makers, Ross, Smith and Beck, Powell and Leland, or into the capabilities of the Paris makers of microscopes, Chevalier, Oberhauser, Brunner, Nachet? Some of these houses have been in existence a long time, have had the stimulus of extensive patronage, have executed the improvements and inventions, for the first time, of eminent opticians, and have made many improvements themselves. We have done admirably for our time, but when we recollect that we have invented little or nothing, have imitated mostly what others have done, sometimes improved a little on it, we are at a loss to see the propriety of the Gazette's remark, "In the manufacture of microscopical instruments we can beat the world."

Such remarks have simply the effect of exposing us to ridicule. Suppose Spencer did make an *objective* with which he succeeded in resolving the lines on *Navicula Spencerii* and *Grammatophora subtilissima*, does it follow that nobody else has done, or can do, the same thing? Do these facts place Mr. Spencer above every body else in the world?

We have extended our reply beyond what we intended. Still

we have not elaborated the exposure that the Gazette has so richly merited. From what, however, the reader has before him, he will be enabled to judge of the Gazette's effort as a homilist; and will also see how imprudent it is for any one, with even the Gazette's capacity, to attempt to write upon subjects without knowing something about them.

We repeat the remark made at the commencement, that we have had no disposition whatever, to detract one iota from the merits of the American medical profession. We claim to be an inside-brick in the structure that is now going up in this country to the memory of Hippocrates. Nor on the other hand do we wish to encourage the tendency, so common among neophytes in science, to exaggeration. As a nation we are respectable, and will be respected when what we are capable of is fairly set forth; while, should we play the part of the braggadocio, we will be simply laughed at.

Notes on a Trip to the Eastern Cities.

We took the cars on the Central Ohio Railroad on the morning of the 15th of June, at 4 o'clock, A. M., and passed over the Ohio River before noon, a distance of 137 miles. After crossing the river at Bellaire, we soon found ourselves in the scenery of the Alleghany mountains, and before twilight of the same day we reached, on the Baltimore and Ohio Road, the hydrographical axis which divides the streams that flow into the Atlantic through the Chesapeake Bay, from those that reach the same ocean through the Gulf of Mexico. At the point where the railroad crosses, the height of the mountain is 2,700 feet above salt water, the greatest railroad elevation in the United States. As all know, the atmosphere on the route seems to be very pure, while the scenery is picturesque and grand. Typhoid fever nevertheless finds, according to the monograph of Dr. J. E. Reeve, abundant material here to work upon. In many of the counties within the Alleghany range the disease is encountered every year, while at some points, as on Tygart's Valley River, there have been epidemic visitations of a very malignant form. Here are truly a set of circumstances very different from what are found in cities, jails, ships, etc. In Europe it has become very fashionable to regard Typhoid fever as the result

of "*crowd* poison." We have no "crowd" in the Alleghanies. The towns and villages are generally small, and the rural population very much scattered along the mountain slopes and in the valleys; while every where we have the atmosphere charged with exhalations from the turpentine tree. Turpentine is a remedy, in the estimation of some, for the disease.

The ascent of the mountain grade on the western side, is imperceptible and easy, and develops many scenes of nature and art combined, that are worthy of observation. "Kingwood Tunnel," 261 miles west of Baltimore, is a stupendous work, nearly a mile in length, and has been constructed at a cost of $1,000,000. It is now solidly arched and has recently been widened for two tracks.

HARPER'S FERRY.—This place has been fixed up by Nature to attract the traveller. Here we have the junction of the Potomac and Shenandoah rivers, and the appearance that both of these rivers, at some previous time, put their shoulders against the *Blue Ridge* mountain and hoisted it out of their way. Jefferson, I believe, has the credit of giving the first topographical description of the place, and suggests it as "*one of the most stupendous scenes in nature, and well worthy of a voyage across the Atlantic io witness.*" Our readers are aware that this was the place selected by Brown for commencing the work of liberating 4,000,000 of slaves. Skirted on two sides by the mountains, the place would, it might be supposed, present to the eye of the "General" a pretty good fortress in the event of an attack, and in the event of defeat, fine grounds for retreat and guerrilla warfare. But the time had not come for the liberation of the negroes, and the two or three that gathered together in the name of Emancipation were not smiled upon and blessed.

Above Harper's Ferry some twenty miles, in the Valley, we took our first lessons in the alphabet and the nine digits. The old school house is still standing, and we seldom ever travel over the Baltimore and Ohio Railroad without departing from the beeline sufficiently to visit the few acquaintances still living in the locality, and review the scenes of childhood and youth. While we were learning the a, b, c's in Darkesville, Virginia, our nation had the honesty and simplicity of a child, but the efficiency of a full grown man. Now it is proud, vain, speculative, and rapidly tending to disintegration. The foundation of a clever civilization was laid with great care, because it was regarded as an experiment.

Concessions, compromises and mutual forbearances obtained in every step taken, and for half a century we supposed ourselves on the road to distinguished destiny. But, *tempora mutantur*, etc. We are now about in the fix of an ancient nation that, after reaching the highest order of cultivation, lost sight of things practical, utilitarian—became ethereal and sentimental, and thus rendered itself an easy prey to its neighbor. Its neighbor said to it, "You can't do for yourself any longer. Come home with me and I will take care of you the rest of your life."

THE JAPANESE EMBASSY.—From Virginia we proceeded over to Philadelphia to take a look at the Japanese. We found them at the *Continental*, the finest hotel, a Philadelphian remarked to us, in the world.

As to the reasons of the Embassy for visiting our country, our readers are already abundantly informed. Our object was simply that of a little observation. We found the company at the Continental enjoying exclusive quarters. A suit of the best rooms of the house was partitioned off in such a way as to allow of neither ingress nor egress except through the espionage of a police officer stationed at the door. This measure was necessary, as we soon discerned, to prevent the yellow visitors from being smothered to death by the curious of all ages and both sexes, who crowded around the door in great numbers, asking, imploring and, some of them, cursing for admittance. To the guests of the house, however, the opportunities for indulging the optics were as good as could be desired. Among these, the different members of the Embassy circulated very freely, and much more unreservedly than might have been expected, owing to their shyness and non-intercourse habits at home.

As all know, they are of the Mongolian type; and we were impressed, on first view of them, with their great resemblance to the Chinese. To a superficial observer they all look alike, and there are many characters that apply to them all. A closer inspection, nevertheless, reveals diversities. The stature is rather uniform and less, some three inches we should think, than that of Americans. In color the skin resembles the pale yellow of the Chinese, and contrasts strongly with the *red* of the native American. The hair is straight, black, not plentiful; the beard light; no whiskers or mustaches. All that we saw, shave their heads. The two physicians had their heads shaved clean, a measure required by

their rank. Others shave but a portion of the head. This shaved portion embraces a space, commencing on the forehead and extending back to the crown, having an average width of about four inches. The hair is then drawn up from the sides and back part of the head, and tied over the part shaven. Like the Chinese, the form of the head is *pyramidal,* rather round, and uniform in size, though less than that of the Caucasian. The face has great transverse diameter, owing to the expanded zygomatic arches; nose large, flattened, and bottle-shaped at the extremity; lips thick. As a general rule the face is full, fat, and, in some instances, has the swell of the lager beer Caucasian. We looked for the oblique eye, but did not see it well marked in any of them. Taken all together the face is large, and the area, as compared with that of the cranium, greater than among Europeans. The forehead is low and receding, the vertical diameter of the head short, and, as a consequence, a very large proportion of the brain is behind the ears; hence, the phrenologist would say, their polygamy.

The physique, from the specimens that the Embassy presented, is certainly less powerful than what we find among our people. In movement, however, it is easy, quick, and agile—no appearance of crooked backs, stiff ligaments, or rheumatic joints. The gait is shuffling, and the foot kept close to the ground in walking, owing to the wearing of sandals, I suppose.

Among the things most striking in the appearance of this people is their *dress.* There is no such a thing as a "tight fit" in any thing they wear. Every garment has the capacity and ease of the morning-gown. None wear shirts that are visible. The pantaloons are very wide and short, and over them and slightly conforming to the legs, is a drapery still more ample. Covering the trunk in such a way as to leave the neck and upper part of the chest bare, is a loose wrapper, occasionally with a cape upon it, that extends to the waist, where it is fastened by a belt that seems to serve the purpose also of suspenders to the pantaloons. Nothing is usually worn on the head, though once in a while a member of the company will appear with something nearly resembling a misses straw flat, placed on the very top of the head, without embracing the least portion of it, and secured by ribbands under the chin. The feet are covered with sandals—the forepart of which is divided into two compartments, one for the great toe, and the other for the lesser toes. This arrangement secures more

firmly the article to its position. The sandals are constructed of straw and wood, covered over and ornamented with silk and velvet.

There being no sheep in Japan, the clothing is cotton and silk, often very heavy, rich, and beautiful.

Is this dress, that we have imperfectly sketched, worthy of a thought as to convenience, or utility? Here is a nation that has a climate similar in latitude to our own, and with meterological characters not very unlike what obtains in islands of near the same latitude east of the American continent. The nation has worn out more clothes, doubtless, than we have; and, it is to be presumed, ought to know something of æsthetics. The loose and roomy character of every article of clothing certainly promotes comfort, and facilitates growth and motion; and why not more philosophical than "tight" pantaloons, "dress coats," or "lace-jackets?" Then, again, how much do these people err in having the upper part of the chest, the neck, and head exposed, like the face and hands? Are not such practices as sensible as cravats, comforters; and as wool, fur, or silk, starched and modeled into the stove-pipe form as a covering to the head, and adapted to it too with the exactness of a glass jar receiver over an air-pump? When the Japanese wear a hat at all, it is so constructed as to keep off the sun or rain, but not to interfere with either the growth of the hair, or the circulation. Baldness of the pate (*Alopecia*) is a very common trouble with our people, and that one a bachelor bears as impatiently as he does the noise of children. May it not be due, in part, to our fashion of covering the head? Females have less of it than males, because, perhaps, the head-dress is lighter and more pervious.

PHYSICIANS OF THE EMBASSY.—In the Embassy were two *physicians*. Owing to the fact that they communicated but imperfectly, and mostly in monosyllables, no one had an opportunity to ascertain what they knew of medicine, or the condition of the science in their country. They were invited by the surgeons of Philadelphia to witness operations, and seemed to take an interest in what they saw. They purchased a copy of *Gross' System of Surgery*, to take home with them.

No one could observe these people very long without being impressed with their peculiarities. Without the amount of mental or physical force which we possess, they nevertheless have erected and maintained a civilization that in some respects is founded on enlarged and deep views of human nature; and has incident to its

operations fewer vices than ours. Long attrition and friction against each other, like the effect of the wheel on pebbles in making marbles, have rubbed away all the angles and asperities of nature, and hence the general suavity of manner common to them all.

The last evening of the stay of the Japanese, the Philadelphians entertained them with a display in the way of *Pyrotechnics*. Explosive and luminous devices are perhaps better understood in Japan than here; for, although the two Ruggieries, father and son, have the credit of inventing and bringing to notice everything in this line, there is every reason to believe that the Chinese are entitled to priority. Suffice it, however, to say, that nitre, sulphur, charcoal; the filings of iron, steel, copper, zinc; resin, camphor, lycopodium, were put under contribution, *secundem artem*, for the pleasure of Japanese eyes, and they seemed to enjoy the sights. "What a childish display," some one, who was looking with us out of the window, remarked, and we forgot to reprove him for his bad taste.

So much for the Japanese. We looked upon them as being on a "fool's errand" to this country. Feted and caressed as they have been by our people, they are little conscious, if intercourse is kept up with their country, of the condition we will have them in, in half a century. We are progressive, subversive, and "dissipative;" and these traits will not be long in being demonstrated in Japan. England has put one hundred millions of the Hindoos to work for her, within the last one hundred and fifty years, and has now a war with China to inaugurate a similar policy there. We are no better. An inferior race in our hands gets no quarter. Non-intercourse is the policy for Japan if she would be happy and free. Her trade with us, which would not, in all probability, amount to half a million of dollars annually, will turn out to be a poor compensation for loss of independence, and the reign throughout her empire of American and English cupidity.

Franklin's Tomb.—No one can visit Philadelphia without being reminded that it was the theatre of the immortal Franklin. Here it was that many of his noble deeds as philanthropist, statesman and philosopher were witnessed. His experiment, that proved the identity of the explosive discharge of the Leyden jar, and atmospheric lightning and thunder, was made in, what was at the time, an open field in the vicinity of this city. His remains, with those of his wife, were deposited in Christ's Church Cemetery, a

locality now in the heart of the city, fronting on Arch and Fifth streets. The grave is found in one corner of the cemetery, and is marked by a plain slab of Pennsylvania marble, six feet in length, four feet in breadth, two inches in thickness, resting on a brick wall one foot in hight. The slab, as one of his descendants informed me, was prepared according to Franklin's own directions, and upon it was placed the following:

BENJAMIN
and
DEBORAH } FRANKLIN.
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It appears that the philosopher expected to survive until after the year 1790, and hence he left the blank after the figure 9, to be filled as the event might require. He died, however, in the year 1790, and to the figures which by his own directions had been placed upon the slab, his relatives had only to add the cypher. The remains of his daughter, Sarah Bache, wife of Richard Bache, and those of his son Francis, lie by his side. The latter died Nov. 21st, 1736, aged four years; and on his tomb-stone the father's affection is poured out in the beautiful little epitaph, "*The delight of all who knew him.*"

Here, then, we have dust to dust, without ostentation. A plain slab covers all that is earthly of a man whose name will continue in the archives of science long after the gigantic marble monuments and pyramids, erected often over insignificance, shall have passed into solution. Who is there that appreciates what Franklin did, without venerating his taste as to the phenomena that should mark his final resting place?

(To be continued.)

NOTICE TO SUBSCRIBERS.—The present number completes the *Twelfth* volume of the Journal. Many of our subscribers are in arrears, not only for the present but for previous volumes. Indeed, we have thousands of dollars in the hands of those who have been reading the Journal for years, that ought to be remitted to us at once. To quite a number, during the past year, the work has been sent with an invitation to examine it, and if pleased with it to become subscribers. In many instances we have had favorable

returns; in others, after receiving the most of the numbers for the year, notices af "*discontinuance*" have come to hand. We have never been prepared for such acts of injustice at the hands of medical men, and they would affect us unpleasantly, were we not of the belief, that in many cases they are purely the result of carelessness. Those who know themselves in arrears will, if they wish the succeeding volume, please remit at once.

Thirteenth Volume.

The *Thirteenth* volume of the Ohio Medical and Surgical Jour nal will be commenced with our next (September) number. The work is now one of the oldest in the United States. To it have been sent for *Review,* since our connection with it, pretty much all of the medical works during the time published, or re-published in the United States. Besides, notices and reviews of scientific publications, and the transactions of societies for the promotion of knowledge, have, from time to time, appeared.

Our own course, and that of our colleague, has, in the past, been marked by a rigid adherence to the suggestions of science as the only basis of medical practice. The leaning that has been so obvious in many places to the "do-nothing" system; and the skepticism, expressed occasionally in high positions, in reference to the curative powers of drugs, have received no sympathy at our hands. We have exposed them as the mere results of whim and fashion, and only advocated by men of rickety intellect, or dishonest tendencies. We have never, however, contended that in the management of disease "*Nature,*" in the language of Rush, "*should be kicked out of doors;* or with Stahl, that drugs act as mere assistants of Nature in curing disease. Such are mere dogmatisms. Our doctrine is, we have drugs in the materia medica that can take a disease by the cuff of the neck and the seat of the breeches, and pitch it out of the organism; and it is only a matter of time and experiment, that all other drugs may be used with the same certainty as quinia.

Nor have we been backward in the expression of our opinions as to the course and tendencies of our Medical Literature. Journals have been multiplied until we have some forty, or more, in number, and books have increased until we now rival, in this line, the oldest countries of Europe. *Scribbling,* indeed, has taken the place too much of original investigation; and, as a consequence, we

have less character than we ought to have. Very few among us really can get their consent to labor and plod for weeks, months, or years together, in a quiet unostentatious way, in getting hold of a little abstract truth, *that is a truth;* and from which a thousand practical measures may flow. We owe it to ourselves, as well as to the world, to *increase,* as well as to *diffuse* knowledge.

For the future we have no promises to make. We will try to make the Journal reflect the state and tendencies of the profession. Every thing that occurs abroad or at home, new or valuable, will be recorded. We have a large number of Correspondents to whom we are indebted for past favors; and we have assurances that they will not be unmindful of us hereafter. To these we have been indebted very much for rare cases and accounts of Epidemics. Their contributions are always interesting; and, in many instances, have been extensively republished by other Journals.

MEDICAL JOURNALISM.—*Peninsular and Independent.*—Only a couple of years since the two medical journals of Michigan, The Peninsular and The Independent, were merged under the name of the Peninsular and Independent, under the proprietorship of Professors Palmer and Gunn. A recent issue contains the announcement of a suspension for the want of support.

This journal was ably and honorably conducted, was issued in most creditable style, and had the co-operation of an able corps of contributors. It is certainly to be regretted that State pride, if not a higher consideration, did not prompt the profession of our neighboring State to sustain its only medical periodical.

Belmont Medical Journal.—Our friends of the Belmont Medical Society, after a commendable effort to sustain their "organ," have yielded to necessity, and suspended. There is one point of view in which these frequently occurring suspensions are very unfortunate. The projectors of new enterprises usually endeavor to commence on the basis of advance subscriptions. The fact that a large part of our journals fail within a few months or years, tends to deter physicians from advancing their money, and leads them to adopt the precaution of holding on to the funds till they have

received the worth of them. This distrust is fatal to new enterprises, affects all our journals more or less, and tends to beget and foster the miserable credit system, or rather system of nonpayment, which is so destructive of the interests of medical journalism.

New Journals.—*Georgia Medical and Surgical Encyclopedia.*—This is the title of a new journal published at Sandersonville, Georgia, under the proprietorship of Drs. H. N. Hallifield and T. W. Newcome.

It was stated some time since, in the American Medical Gazette, that Professors Lawson and Blackman were about to start a new journal in Cincinnati. We have heard the statement reiterated in private circles, but have no means of knowing certainly as to its correctness.

There is an accredited rumor that several gentlemen are about starting a bi-monthly journal of 96 pages in this city. We understand it is to consist largely of translations and republications of foreign matter, and is to present a large corps of paid contributors.

The New York Journal of Medicine has just completed its seventeenth volume. It has hitherto been published bi-monthly, and has sustained, in an eminent degree, the position of a high-toned scientific journal. It now commences a new series, under the name of the American Medical Times, which is to be published weekly.

In every particular this change is, to us, a matter of deep regret. There is no journal on our exchange list which we have prized more highly than the New York Journal. We are not convinced that the change to a weekly is in any wise calculated to improve either its character or prospects. It is well enough that we have weekly journals, and we have not a doubt but this is destined to be one of the first in the country. But we look upon it as essentially a descent from the sublime to the ridiculous, for that journal to come down from the elevated and dignified position it has occupied, to deal in the little matters that almost necessarily constitute the pabulum on which weekly journals subsist. If New York would reach the position she aspires to and to which she ought to be entitled, she would do well to engage in a generous rivalry with Philadelphia, in sustaining such journals as the American Journal of

the Medical Sciences, or the North American Medico-Chirurgical Review.

The Cleveland Medical Gazette has reached the end of its first volume as a monthly of 32 pages. It will be continued as a bi-monthly of 80 pages.

H.

Death of Dr. Sacsche.—Just as we were about to go to press with the last form of the present issue of the Journal, we received the painful intelligence of the death of our esteemed and venerable friend, Dr. Geo. J. Sacsche.

Dr. S. was one of the veteran practitioners of this city. A meeting, including most of the profession of the city, at once assembled and took action expressive of their regard for the deceased.

The resolutions passed, we reproduce, as far as possible, from an impudent mutilation of them published in the city papers.

Whereas, A dispensation of Providence has removed from our midst our fellow townsman, neighbor, and professional brother, Dr. George J. Sacsche; and whereas, we have long regarded him as a high-toned, honorable, devoted and able physician, a dexterous surgeon, a man of liberal learning, a generous friend, and a genial companion: Therefore,

Resolved, That we deeply lament the loss which the community, the profession of medicine, and especially his bereaved wife, sustain in his death.

Resolved, That in respect to his memory we will attend his funeral in a body, wearing the usual badge of mourning.

Resolved, That the secretary of this meeting be instructed to communicate these resolutions, with the earnest expression of our sympathy, to the companion of the deceased, to his friends in Germany through the press of the city of Hamburg, and also to secure their publication in the journals of this city.

Occlusion of the Os Uteri from the use of Caustics.—We make the following significant extract from the records of the Boston society for medical improvement:

"Dr. Storer said he had seen, in consultation, a woman who had been in labor several days, and in whom no os uteri could be found. He learnt that the patient had formerly been treated for ulceration of that part, by the repeated application of caustics. Dr. S. made an incision, three inches in length, into the presenting part of the womb, and an hour afterwards, there having been no pains, he opened the head, and delivered the child. The woman recovered, and afterwards menstruated.

Dr. Parks said he once had under his care a lady who had been treated in Liverpool, for ulceration of the os uteri, by the application of caustic potash. The canal was apparently obliterated, and the cervix eaten off. She afterwards came under the care of Dr. J. H. Bennet, who made an artificial opening, with an instrument he devised for the purpose, which was kept open by means of elastic bougies, introduced from time to time.

Dr. Putnam had been applied to in a case in which caustic potash had been applied to the os uteri during pregnancy, with the effect of diminishing the calibre of the canal. He advised the use of tents until delivery."

The Louisville Journal for March contains the report of two cases of occlusion following the treatment of chronic inflammation of the cervix, in one of which potassa cum calce, and in the other some unknown caustic application had probably been used. These cases contain a wholesome caution.

H.

In the last number of the Journal we stated incidentally that we supposed that Dr. Stephen Smith, of New York, had abandoned his work on Mal-practice. We received a note from him soon after assuring us that he was still earnestly engaged in his work, and that it was rapidly approaching completion. It will contain the report of several hundred adjudicated cases (500 we believe). From the well known abilities of the author, it is to be hoped that this work, in connection with that of Ellwell, recently announced, will supply the want so generally felt in connection with this subject.

H.

Summer Course of Instruction at Starling Medical College.—During the present summer ten young gentlemen have been in full attendance, and three others have given partial attendance, to the summer course of instruction. The exercises have consisted of a daily visit to the hospital, and four familiar lectures, or recitations. The class is one of unusual diligence and intelligence, and constitutes a most admirable neuclus for the approaching winter class. H.

Homeopathy in Cleveland.—We sincerely regret to learn that the principal, if not the only, hospital resources of our friends of the Cleveland Medical College, have been wrested from them and awarded to the Homeopathists. For a number of years our friend professor Weber has occupied the post of physician and surgeon to the county infirmary and city hospital of that place, to which his services have been given gratuitously. Recently he was superceded by the appointment of the professor of surgery in the Cleveland Homeopathic College. We suppose the latter will occupy the place till some spacious representative of spiritualism, or some later edition of humbuggery, supercedes him. It is not at all likely that the city council of that city will very soon award it to any one not the representative of some form of humbuggery.

H.

Index to Volume XI.—Unfortunately, by an oversight, the index to the volume of the Journal terminating a year ago was omitted. It will be found appended to the present number.

H.

"*Sleeper's Lightning Fly-Killer—Destroys Flies Instantly, without Danger to Anything Else.*"

The above label is attached to a preparation of a coarse brown paper, sold very generally in this place by druggists and others, and used by many families, for the purpose of killing flies. The inference from the label would be that it is not a poison to anything except flies. A chemical examination of a specimen, how-

ever, proved it to contain over ⅛ grain of *arsenic* per square inch; another specimen furnished over ⅛ grain of arsenic per square inch. This proves the label to be an imposition, and instead of the substance being inert, it contains a fatal poison.

The arsenic is readily detached from the paper, and might thus find its way into food. It is also recommended, to make it the more attractive, to moisten the paper and sprinkle it over with sugar. This might induce children to eat it, and thus it might produce fatal effects.

It should therefore be banished from the community as a very daugerous preparation.

W.

On the Amount of Cantharidin contained in different Parts of the Body of the Cantharis Vesicatoria, by M. FERRER. *

Various opinions have been expressed on the question whether the cantharidin is equally distributed all through the body of the insect, or whether it exists only in certain parts to the exclusion of the others. Pliny, Galen, and Aetius believed that the elytra had no action. Hippocrates recommended that the head with its antennæ, the elytra, the membranous wings, and legs, should be rejected, as he considered them completely inert. This opinion was adopted by Schwilgué in the third edition of his *Materia Medica*, which appeared in 1818. Latreille, Cloquet, and Audoin, on the contrary, assert that all parts of the body contain cantharidin.

In 1826, M. Farines, a pharmacien at Perpignan, having tried, without effect, plasters prepared separately with the powder of the elytra, wings, antennæ, and legs, returned to the opinion of Hippocrates, and in a note addressed to the Societie de Pharmacie of Paris laid down the following conclusions:—

1. That the active part resided only in the soft organs.
2. That the hard organs do not possess any vesicating power.

In 1855, M. Courbon, in a memoir presented to the academy, also said that the vesicating principle of cantharides resided only in the soft or internal parts; but in opposition to M. Farines he contended that the soft parts of all regions possessed a vesicating property: that the soft or internal parts of the legs and head are as

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* Repertoire de Pharmacie.

active as those of the thorax and abdomen, and that the only parts of the body completely inert are the elytra, the antennæ, and the portions of the feet composed only of hard parts.

In 1856, M. Berthoud sought chemically for cantharidine: 1, in the abdomen and thorax, which he designated the *soft parts* of the flies; and 2, in the elytra, wings, antennæ, and feet, which he called the horny parts:

250 grammes of the abdomen and thorax gave 0.45 of canthar-adin.

125 grammes of the horny parts gave 0.053.

These results, completely opposed to the conclusions of M. Farines, do not, however, demonstrate the existence of cantharidin in every part of the body of the fly. They only serve to confirm the opinion and the observations of M. Courbon. The parts which M. Berthoud has named collectively the horny parts, and from which he has extracted the cantharidin, contain in their interior a certain quantity of soft parts (the soft parts of the head and legs) and the cantharidin might be obtained exclusively from these soft parts if the observations of M. Courbon were strictly true.

On a question so interesting and as it appeared to me so imperfectly resolved, I thought it would be useful to make some new researches. To ascertain whether cantharidin is indifferently distributed over every part of the body, or whether it is only contained in particular parts, I have sought for it;—1, in the feet and legs; 2, in the head; 3, in the elytra and wings; and 4, in the thorax and abdomen.

First experiment:—11 grammes of the feet and legs were powdered and treated in a displacement apparatus with 25 grammes of chloroform; after macerating for three days the liquid was run off and the chloroform displaced by means of alcohol. The chloroform so obtained was allowed to evaporate in the air, and the residue was placed between folds of blotting paper to absorb the oil. The crystals left were redissolved in a small quantity of chloroform, again crystallised and then weighed. From the 11 grammes of the feet, 0.01 of cantharidin was obtained, still stained with a little of the green oil.

Second experiment:—17 grammes of the head and antennæ (there were very few antennæ) were treated with 35 grammes of chloroform, like the preceding, and from them 0.015 of cantharidin was obtained.

Third experiment:—11 grammes of the elytra and membranous

wings were treated with 25 grammes of chloroform, and yielded 0.009 of cantharidin.

Fourth experiment:—30 grammes of the thorax and abdomen were mixed in a displacement apparatus with 70 grammes of chloroform. In this experiment the residue obtained by the spontaneous evaporation of the chloroform, furnished a large quantity of crystals. After having absorbed the oil and redissolved the crystals in a small quantity of chloroform, I threw the solution on a filter. After filtration I opened the paper and found it covered with small micaceous crystals of cantharidin perfectly white. The chloroform had deposited the crystals as it evaporated, and the green oil had passed through with the chloroform which had not evaporated. As this last portion might still contain a small quantity of cantharidin, I evaporated and again dissolved it in a little chloroform, and threw it on a filter as before. After repeating this a third time I obtained all the cantharidin furnished by the 30 grammes of the thorax and abdomen perfectly white. It weighed 0.072 grammes.

The blisters produced on my arm by a very small quantity of the crystals obtained in my experiments, left no doubt of their nature. From these experiments the author draws the conclusion that the active principle of cantharides is found distributed over all parts of the body.

[It is obvious from the above experiments:—1, that the feet and legs of the insect furnished $\frac{1}{1100}$ their weight of cantharidin; 2, the head and antennæ, $\frac{1}{1133}$; 3, the elytra and membranous wings, $\frac{1}{1222}$; and 4, the thorax and abdomen, $\frac{1}{416}$. The mean product of the insect being $\frac{1}{968}$ its weight of cantharidin.

500 grains of the best insect that could be obtained in this market, and which looked very fair, when treated according to the above process, furnished $\frac{31}{100}$ of a grain of cantharidin. This would be in the proportion of $\frac{1}{1613}$ the weight of the insect. W.]

Prize Offered.—From our exchanges we take the following, which should be of interest to many of our readers:

"To the Medical Students of the United States of America.—I will give a premium of $250 for the essay which

shall be judged the best, by competent judges, on the 'Anatomy and Physiology of the Animal and Organic Nervous Systems.' The essays to be sent to me on or before the first of March, 1861. I will likewise give a second premium of $250 for the best essay on the same subject; the essays to be handed in on or before the first of March, 1862.

" The medical students who shall be declared the successful competitors will be required to declare, on their *word* and *honor*, that the essays are their own production, and that they have not been assisted by any legally qualified medical man.

"JOHN O'REILLY, M. D.,
230 Fourth st., Washington Square, N. Y.

"March 8, 1860."

Fœtid Perspiration of the Feet—Bromidrosis.

In a recent number of the Boston Medical and Surgical Journal, Dr. B. Joy Jefferies adduces notes on this subject from the lectures of Prof. Hebra, on the anatomy and physiology of the skin, delivered in the University of Vienna, in 1847. They are as follows :

"There is no doubt that the sweat glands play an important part in the animal economy. Unfortunately, their physiological, and, still more, their pathological relations are but slightly understood. In general, we know that the secretion of sweat is very copious after hard work or continued bodily exertion, especially in the heat; and further, that it is under the influence of the nervous system.

"The sweat is colorless, salt to the taste, has a weak acid reaction, and a peculiar smell. It can scarcely be denied that every individual disseminates a peculiar specific odor. This is proved by dogs following their master's track, and finding him by the help of their greatly-developed organ of smell. *Our* organ of smell does not possess the necessary development to enable us to determine such differences. But there are individuals whose peculiar penetrating odor can be easily recognized by every one. It is a great mistake to attribute such a disagreeable smell to the *sweat alone*. We must rather ascribe it to the secretion of the sebaceous glands. We may be convinced of this by simply examining an

individual, the excretions of whose skin have a bad odor. On the palm of the hand, where there are only *sweat* glands, we shall not find any unpleasant smell; it will, on the contrary, be strong on those parts of the body where the sebaceous glands are numerous—as the back, and more particularly in the arm-pits. It is moreover certain that the smell does not come immediately from the *fresh* secretion, but that it exists after this has decomposed. The fresh secretion has either none, or else a slight odor of rancid fat. But if the sweat remains some time in contact with the skin, it undergoes a chemical change, and then the disagreeable smell will be perceived. We will enter more particulary into this subject when we speak of the 'fœtid foot sweat,' which long ago was considered to be a materia peccans whose elimination from the body was desirable, and with whose healthy excretion no therapeutical interference was allowable."

* * * * * * *

"We come now to speak of a subject upon which similar erroneous views still exist. It is the so-called 'fœtid foot-sweat' (bromidrosis). We have already said that the sweat, when secreted, has no bad odor. Hence it comes that persons troubled with this 'fœtid foot-sweat' have no disagreeable odor on the palms of the hands, no matter if the perspiration trickles from them. And when the feet are carefully and properly cleansed (together with the toes and nails), they lose the highly-penetrating smell when they again begin to perspire. This so-called bromidrosis localis is found most frequently in young people, who neglect proper cleanliness, and who possess no superfluity of covering for the feet, so that this is seldom changed. Hence, by the decomposition of the collected sweat, free fat acids are formed that have a disagreeable odor. These are absorbed by the pores of the leather, and one can easily convince himself, through his sense of smell, that the boots are the seat of the odor. Persons wearing a light covering for the feet and often changing it, will have little trouble from 'fœtid foot-sweat.' Hence this seldom occurs in the female sex, although the perspiration is more copious in women.

"As, from what has been said, it is evident that we have to deal rather with 'stinking boots' than 'fœtid foot-sweat,' the absurd ideas which are in circulation as to the evil effects of suppressing or too quickly checking the sweating of the feet, must be entirely

given up. On other parts of the body also, where the secretion has an opportunity to remain some time in contact with the surface of the skin, *e. g.* in the arm-pits, on the scrotum, perinæum, &c., a similar decomposition of the sweat takes place, and a very disagreeable odor is created. The treatment of this 'fœtid sweating of the feet,' is therefore reduced to ordering greater attention to the cleanliness of the skin, and a more frequent changing of the covering of the feet."

Singular case of Loss of the Hair.—Dr. H. O. Jewett, of Cortlandville, N. Y., communicates the following to the Boston Medical and Surgical Journal: "—— Corey, a boy aged about 10 years, presented himself in my office. Struck with his singular appearance, I requested him to remove his hat, which he did with some reluctance. Not a hair was to be seen—neither had he eyebrows or eyelashes; and upon a critical inspection, not a vestige of down or even the rudiment of a hair could be detected upon any part of the body. The lad seemed unusually intelligent for one of his years. He stated that he had enjoyed sound health, having had scarcely a sick day in his life; that when an infant, he had hair like other children; but when four or five years of age, and while in perfect health, it began to fall off, and in a few weeks left him completely hairless. He also stated that though he exercised much, he never perspired. He said, jocosely, that his mother thought 'there were no pores in his skin for the sweat to come out;' and indeed his appearance seemed to justify the old lady's novel conclusion. The scalp and some parts of the body exhibited the glossy, polished aspect presented by the heads of old men who have been bald many years. Nothing like capillary follicles was observable upon any part of the surface; yet the skin was otherwise normal and healthy."

Dr. S. M. Bemiss has been appointed by Governor Magoffin, of Kentucky, to the new office of Registrar, created by the recent act adopted by the Legislature, requiring the registration of Births, Marriages and Deaths. The salary is $1500 a year, and the Registrar is required to publish an annual report, a work of considerable labor.

ORIGIN OF VACCINE VIRUS.—M. Depaul, in a report to the French Academy, has carefully investigated the origin of vaccine virus. The questions he had to answer were: Is the cowpox a disease which has been spontaneously developed in the cow? Or is it the result of an accidental inoculation made with the discharge from the legs of the horse? Or, again, will these two diseases, independently the one of the other, produce a liquid which, when inoculated in the human subject, will preserve him from the small pox? M. Depaul finds that the first of these hypotheses is the only probable one.—*Med. Times and Gaz.*, April 28th, 1860.

ELECTRICITY AS A MEANS OF LIGHT IN SURGICAL OPERATIONS—An apparatus for this purpose was lately exhibited to the Society of Arts in Edinburgh. It consists of a small glass tube doubled upon itself and filled with carbonic acid, hydrogen, nitrogen, or other gas, according to the quantity of light required. Into each end of the tube is introduced a wire from the poles of a coil machine, and when the current of electricity is established, the tube is lighted up without heat being evolved. The instrument is capable of a great number of modifications, and could be adapted for almost any region.

DR. EDWARD WARREN, of Edenton, N. C., editor of the *North Carolina Journal of Medicine*, has received the post of Professor of Materia Medica and Therapeutics in the University of Baltimore, Maryland, lately vacated by the death of Dr. Charles Frick. We hope he will prove as successful in his professorial as he has already in his editorial career.

DR. W. A. HAMMOND, U. S. A., has received the appointment of Professor of Anatomy and Physiology in the University of Maryland, in the place of Professor Roby, who has resigned.

MIDDLE GEORGIA MEDICAL COLLEGE is the name of a new institution inaugurated at Griffin, Ga., making the fourth medical college in the State.

DR. E. R. PEASLEE has resigned the chair of Obstetrics and Diseases of Women and Children, in the New York Medical College.